ALASKA DEPARTMENT OF FISH AND GAME

DIVISION OF COMMERCIAL FISHERIES

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YUKON AREA

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PREFACE

This report presents the bulk of current and historical information concerning the management of commercial and subsistence fisheries in the Yukon area. Data from many special research projects are included in this report; complete documentation of these projects and results will be presented in separate reports.

Data presented in this report supercedes information found in previous management reports. An attempt has been made to correct errors in previous reports and previously unrecorded data have been incorporated into this report which are so indicated by the appropriate footnotes.

The report is organized into the following major sections:

1. Area Introduction. This section presents a detailed description of the area, inhabitants, fishery resources, fisheries and management practices.

2. Area Report, 1982. This section presents a comprehensive report of the current year and makes comparisons with previous years.

In order to facilitate use of this report, tabular data has been separated into current year tables and appendix tables where annual comparisons are made. Text for each major section is followed by current year tables and then by appendix tables.

The following is an explanation of how effort and catch per unit effort data, presented throughout this report, have been derived. Boat (or fisherman) hours have been computed, arbitrarily assuming that if a fishing boat delivers in any fishing period, it is fished the entire period for as many hours as were open to commercial fishing.

Catch per fisherman (or boat) hour is obtained by dividing the total fisherman hours into the catch for the corresponding period of time.

Total fishermen (or boats) is the total number of fishermen making deliveries, irrespective of how many deliveries were made or days fished during a particular "season". There are a number of fishermen who deliver only once or twice during the entire season.

"Total days fished" is the total number of hours open for commercial fishing during the season divided by 24.

AREA INTRODUCTION

Description of Area

The Yukon management area includes all waters of the Yukon River and its tributary streams in Alaska and all coastal waters from Canal Point light near Cape Stephens southward to Naskonat Peninsula (Figure 7). The Yukon River is the largest river in Alaska, draining approximately 35 percent of the state, and is the fifth largest drainage in North America (Figure 1). The river originates in British Columbia, Canada, within 30 miles of the Gulf of Alaska and flows over 2,300 miles to its mouth on the Bering Sea draining an area of approximately 330,000 square miles. With the possible exception of a few fish taken at the mouth or adjacent coastal villages, only salmon of Yukon River origin are harvested in this area.

Fishery Resources

All five species of Pacific salmon are found in the Yukon River drainage (Figure 1) with chum salmon being the most abundant. It is estimated that king, coho, pink and sockeye (red) salmon follow in order of abundance.

Chum salmon are found throughout the Yukon River drainage. Summer and fall chum are the two distinct major runs of chum salmon entering the Yukon River. Summer chums are chiefly characterized by: earlier run timing (early June-mid July), rapid maturation in freshwater, smaller size (average 6-7 pounds), and larger population. Summer chums spawn primarily in run-off streams in the lower 500 miles of the drainage and in the Tanana River system (Figures 2, 3 and 4). Fallchums are mainly distinguished by: later run timing (mid July-early September), robust body shape and bright silvery appearance, larger size (average 7-8 pounds) and smaller population. Fall chums spawn in the upper portion of the drainage in streams which are spring fed, usually remaining ice-free during the winter. Major fall chum spawning areas include the Tanana, Chandalar and Porcupine River systems and also various streams in the Yukon Territory (Figures 4, 5 and 6).

King salmon of the Yukon River are the largest species ranging from 2-90 pounds and averaging 20-25 pounds (sampled from the commercial fishery, large mesh gill nets). Spawning populations of kings have been documented in the Archuelinguk River located approximately 80 miles from the mouth of the Yukon River and as far upstream as the headwaters of the drainage in the Yukon Territory of Canada, nearly 2,000 miles from the mouth (Figures 2-6). Kings enter the mouth of the Yukon River soon after breakup during late May-early June and continuing through mid-July.

Coho salmon enter the Yukon River during late July through mid-September, average about seven pounds in weight and spawn discontinuously throughout the drainage. The major coho spawning concentrations documented to date occur in the tributaries of the upper Tanana River drainage (Figure 4).

Pink salmon enter the lower river during late June-mid July, average approximately 3 pounds in weight and essentially spawn in the lower portion of the drainage (downstream of the village of Grayling) (Figure 2). Pinks have been caught in the main stem Yukon River upstream as far as Galena (river mile 530).

met opposition and was closed completely during 1925-1931. Commercial fishing for king salmon was resumed at a much lower level in 1932, and this species has been taken commercially each year since then. Only king salmon were harvested on a sustained basis prior to statehood (1959). During the period 1918-1959 king salmon commercial catches averaged approximately 30,000 fish annually. Since 1921, commercial catches of chum and/or coho salmon have been made during 1952-54, 1956 and since 1961.

Since the 1950's commercial salmon fishing has been permitted only upstream from the mouth of the Yukon River and in the vicinity of Black River. During the 1954-1960 period, a 65,000 king salmon quota was in effect for the river. Of this total, not more than 50,000 could be taken below the mouth of the Anuk River, 10,000 in the area between the mouths of the Anuk and Anvik Rivers and 5,000 upstream from the Anvik River. During these years, fishing was allowed for five and one-half days a week until specific quotas were obtained.

Under new regulations established by the Department in 1961, the annual king salmon commercial harvest for the entire area averaged 104,371 for the period 1961-1970. This average compared to 63,023 for the previous period, 1952-1960, represents an increase of 66 percent (Appendix Table 1). During the period 1971-1976 catches declined, averaging 88,169 fish annually because of below average runs and regulatory restrictions.

Since 1977, due to above-average runs, commercial catches have increased, averaging 126,571 fish annually (1977-1982). The greatest catch ever made in the area was 157,607 king salmon in 1981.

In 1975 the king salmon commercial catch of 63,740 was the smallest since 1960. During the same period (since 1960) commercial fishing effort increased substantially. Restrictions placed on the commercial fishery during the 1970's have generally resulted in improved escapements compared to the 1963-69 period. Above average escapements occurred in 1971 and 1977-81.

In recent years the decline of the Yukon River king salmon is believed to be partially attributed to the Japanese high seas mothership fishery. The high seas king salmon catches, taken incidentally to more numerous other species, averaged 233,000 fish annually during the period 1960-1977. A peak catch of 554,000 kings were taken in this fishery in 1969 (Appendix Table 31). In some years the Japanese catch has exceeded the total western Alaskan catch (subsistence and commercial). Most of the high seas king salmon catch is composed of immature four year old fish which normally return as six-year-olds, two years later. Based on tagging and scale analysis studies it is estimated that in excess of 80% of the Japanese king salmon catches were of western Alaskan origin (Yukon, Kuskokwim, and Bristol Bay stocks).

The I.N.P.F.C. Treaty was renegotiated in 1977 to afford increased protection for western Alaska salmon stocks. Japanese mothership king salmon catches were 105,000 and 126,000 in 1978 and 1979, respectively. However, in 1980 a record 704,000 kings were taken in the mothership fishery (Appendix Table 31). The large 1980 catch represented an economic loss to western Alaskan fishermen. Following complaints from western Alaska fishermen groups regarding the very large 1980 high seas catch, the Japanese voluntarily agreed to limit their mothership catch to 110,000 king salmon per year. Reported high seas catches were at reduced levels in 1981 (88,000 kings) and 1982 (107,000).

(528,000) and 1981 (575,000). In 1982 an exceptionally large catch of 1,015,000 chums were taken in the South Unimak - Shumagin Islands June fishery.

The commercial fishery for fall chum salmon in the Yukon River began in the early 1960's; however, the fishery has only recently expanded (since 1969). During the 1961-1968 period, catches averaged 41,378 annually and since 1969 (1969-1981) catches have averaged 230,483. The recent development of the fall chum fishery is also reflected by corresponding increases in fishing effort and processing facilities. Because of their good quality (bright, silvery appearance, large size, robust body shape and high oil content), which is related to their destination to spawning areas in the upper portion of the drainage, fall chums are in great demand and are harvested in all fishing districts. The majority of the fall chum salmon commercial catches are taken presently in the lower three districts (Appendix Table 13). The largest fall chum catch occurred in 1981 when 486,059 fish were harvested.

Fall chums are of less importance for subsistence than summer chums throughout the Yukon River drainage except in that portion of the drainage upstream of the mouth of the Koyukuk River where it is estimated that fall chums comprise 60-75% of the total subsistence harvest.

There is evidence that the early run (late July-early August) of fall chums are bound for the Porcupine River system and Yukon Territory streams. The late run of fall chums (mid-August-early September) are believed destined primarily for the Tanana River.

Run magnitudes, based on comparative catch data and limited escapement data, have fluctuated sharply depending on the brood year strength. Very large runs were experienced in 1970, 1971, 1975, 1979 and 1981 while small runs occurred in 1973, 1976, 1978, 1980 and 1982. Aerial survey assessments of escapements began in 1972. Upper Tanana River drainage escapements in general appear more stable and experience less fluctuation than the Porcupine River and Toklat River systems. For example, escapements in the Fishing Branch River (Porcupine River drainage) have ranged from 353,000 (1975) to 6,000 (1982) and the Toklat River (upper area) have ranged from 108,000 (1979) to 3,000 (1982).

The Department will maintain an overall guideline harvest range of 145,500-320,500 (233,000 midpoint) of fall chum salmon until future returns from current levels of harvest can be evaluated. The Board of Fisheries at its December, 1978 meeting replaced the previous quota system with the more flexible guideline harvest range concept. Beginning with the 1974 season the Alaska Board of Fish and Game established quotas of 200,000 chum salmon for the lower three districts (combined) and 50,000 combined chum and coho salmon for the upper three districts.

Coho salmon runs of the Yukon River are of lesser magnitude than fall chum salmon and are taken incidental to the commercial fishery for fall chums. Coho catches have averaged 10,498, and 18,945 fish during the periods 1961-1970 and 1971-1981, respectively (Appendix Table 2).

Commercial salmon catches by district and statistical area since 1960 are presented in Appendix Tables 2, 5-6, and 11-13.

fishermen commonly used more than one type of gear during the season. A total of 696 fishing vessels operated in the lower Yukon area in 1982 (Appendix Table 4). With the advent of the Limited Entry program in 1976, fishing effort in terms of the number of participants has apparently stabilized but efficiency has increased. In 1982 a total of 676 CFEC gill net permits were issued (Appendix Table 3).

Since 1970 districts 1 and 2 commercial king salmon catches have averaged 86,143 fish annually (1971-1981)(Appendix Table 2). In 1981 the Board of Fisheries established a 60,000-120,000 king salmon guideline harvest range for districts 1 and 2 combined.

In District 3 the commercial salmon fishing season also opens by emergency order between June 5-15 and fishing is allowed three days a week until the 1,800-2,200 king salmon guideline harvest range is taken (Appendix Table 10).

Excluding the 1920's, sale of other species of salmon captured during the king salmon season in the area of the present lower two districts has been allowed only since 1967. The incidental catch of summer chum salmon was limited during this season as fishermen used gill nets of stretched mesh measure of eight inches or greater. However, beginning in 1970, each fisherman could substitute up to 50 fathoms of gill net of any mesh size in districts 1 and 2. In 1973 all mesh size restrictions were lifted during the king salmon season (from June 1 through early July) in order to allow greater opportunity to use small mesh nets which are selective toward the more abundant chums. However, the majority of fishermen continue to fish the larger mesh king salmon nets during the king salmon season. Comparative lower Yukon area king and summer chum salmon catches by mesh size are presented in Appendix Table 7.

Since 1961 the commercial fishing season in the lower Yukon districts has been reopened following the closure of the king salmon season. During the second season primarily chum and coho salmon are taken. Prior to 1973 the mid-season closure during most of July and often late June was initially for the purpose of insuring an adequate supply of summer chum salmon for upriver subsistence fishermen. This closure also provided protection for the late stages of the king salmon run.

Subsistence fishing for <u>summer chums</u> has declined in recent years and the Department has liberalized regulations to provide for an earlier reopening in July to harvest the surplus. Concurrent with an early reopening of the season, a regulation was promulgated in 1973 specifying gill nets of only 6-inch mesh or less may be fished after a specified date in early July in districts 1 and 2. Use of small mesh gill nets in early July allowed a greater harvest of summer chums and also minimized the king salmon catch (Appendix Table 7). Beginning with the 1976 fishing season a regulation was promulgated which established a flexible range of dates from June 27 to July 5 in districts 1 and 2 (and July 5-15 in District 3) after which only gill nets of 6-inch or less mesh gill nets may be used.

In recent years (1973-81) the lower Yukon area commercial summer chum salmon catch has averaged 559,958 fish annually (Appendix Table 13).

<u>Fall chum</u> salmon have been harvested in the lower Yukon area beginning in 1961. Since expansion of the fishery in 1969 lower Yukon area fall chum

2. Two new districts were added: Districts 5 and 6.

3. Salmon catch quotas were established for the upper Yukon area as follows:

   a. District 4: 1,000 king salmon and after August 15, 10,000 chum and coho salmon combined for the area.

   b. District 5: 3,000 king salmon and after August 15, 25,000 chum and coho salmon combined for the area.

   c. District 6: 1,000 king salmon and after August 15, 15,000 chum and coho salmon combined for the area.

4. In districts 4, 5 and 6, the weekly commercial fishing period was reduced from 7 to 5 days per week.

Since that time the Board of Fisheries has enacted a number of major regulation changes in the upper Yukon area:

1. Weekly fishing periods were reduced in all districts (except the upper portion of 5) from 5 to 4 days per week, and split-period fishing schedules were established.

2. King salmon and fall chum and coho salmon quotas were replaced by flexible guideline harvest ranges: District 4: 2,250-2,850 king salmon and 10,000-40,000 fall chum and coho salmon; District 5: 2,700-3,300 king salmon and 10,000-40,000 fall chum and coho salmon; and District 6: 600-800 king salmon and 5,500-20,500 fall chum and coho salmon.

3. District 4 boundaries were redefined and new subdistricts created to allow for stock-specific management of fall chum and coho salmon.

4. New subdistricts within District 5 were created to achieve better balanced harvests and escapements.

Because of the common origin of salmon stocks which are harvested throughout the length of the Yukon River, the commercial and subsistence fisheries in the middle and upper river districts cannot be considered separate or distinct from those in the lower portion of the drainage. They do, however, differ in several important respects.

For reasons of relative abundance, flesh quality, and the existing regulation structure, the second, or fall run, of chum salmon is the target species of the commercial fishery in districts 5 and 6.

The summer run of chum salmon is of paramount importance in District 4 and comprises approximately 65% of the total upriver commercial harvest (Appendix Table 13). Unlike the lower river fisheries, relatively few summer chum salmon are taken commercially in districts 5 and 6. Because of their low abundance, advanced state of sexual maturity, and consequent poor quality, the flesh is difficult to market; however, roe quality of summer chums is judged to be excellent.

Subsistence Utilization

There are approximately 10,000-15,000 Eskimo and Indian people in the area, the majority of whom reside in excess of 45 small villages scattered along the coast and major river systems. Nearly all of these native people are dependent to varying degrees on fish and game resources for their livelihood.

Subsistence fishermen operate gill nets largely in the main rivers and, to a lesser extent, in the coastal marine waters, capturing mainly salmon, whitefish and sheefish. Fishwheels take considerable numbers of salmon in the upper Yukon and Tanana rivers. Beach seines are occasionally used near spawning grounds to catch schooling or spawning salmon or other species of fish. Traps and fish weirs of various designs are also used, mainly in the fall and winter months, to capture whitefish, blackfish and burbot. Sheefish, pike, char and "tomcod" (saffron cod) are frequently taken through the ice by hand lines. Dip nets are used in late May-early June to take smelt in the delta area and in late October-early November to take lamprey in the main Yukon River downstream of Grayling.

There is usually little intentional wastage of the fish taken for subsistence purposes. The major portion is sun dried or smoked for later consumption while the head and viscera may be fed to sled dogs.

Comprehensive annual surveys of the Yukon River subsistence salmon fishery were initiated by the Department in 1961. Data obtained cannot be easily compared with that of earlier years which was often incomplete or lacking for many years. Methods and coverage of these earlier surveys were not documented and their accuracy cannot be determined. However, there are records indicating that in excess of one million salmon (mainly chums) were taken for subsistence in some years during the early 1900's and even as late as 1940 (Appendix Table 1).

The Department's subsistence fishery surveys (personal interview, catch calendar, and/or catch questionnaires) obtain catch, effort and other associated data from villages and fish camps along the main river in Alaska, including portions of the Tanana River and Chandalar River. Catch data from the Canadian portion of the drainage has been supplied by personnel of Environment Canada - Fisheries Service (Whitehorse office) since 1962. In recent years, the Department has conducted surveys of Koyukuk River villages.

About 1930 the airplane began replacing the sled dog as mail and supply carrier, starting the gradual decline of the subsistence salmon fishery. This decline has been accelerated in the past years as increased welfare payments and employment opportunities, including commercial fishing activities, have become available to the native people. The reduction in subsistence fishing is not necessarily related to fish abundance, but mainly reflects decreases in effort and dependence due to a changing way of life.

To illustrate changes in effort, there were 393 fishwheels operated on the Yukon River in 1918. Fishwheels are very effective if fished properly. A single wheel is capable of taking from 20,000 chum salmon annually. The number of fishwheels recorded during the 1970 survey was an all-time low of 55, a 67% decrease since 1961 (Appendix Table 22). However, because of the expansion of the upper Yukon commercial fishery, beginning in 1973, the amount of fishwheel gear used for subsistence has sharply increased (207 units in

significance is not well known. It is thought, however, that residents of the upper Yukon area are much less dependent on these miscellaneous species than are their downriver counterparts.

Management

The overall objective of the Yukon area research and management programs is to manage the various salmon runs on an optimum sustained yield basis. The commercial fishery is regulated on the assumption that a harvestable surplus, after providing for spawning and subsistence utilization requirements, is available. Subsistence fishing has been designated by the Alaska State Legislature and the Board of Fisheries as the highest priority use, although, where the dependence upon subsistence fishing has declined, the Department has liberalized regulations to allow development of commercial fisheries.

Management of the salmon runs is further affected by several limiting factors. Since most of the fisheries only became developed or expanded in recent years, there is a lack of adequate comparative catch and return data on which to evaluate the long term effects of increased commercial harvests. In contrast to other management areas in the state where intensive research studies have been conducted for many years, forecasts of actual numbers of salmon returning to the Yukon River system are not available. In addition, due to the character of the fishery (e.g. allocation problems between upriver and downriver fishermen), the salmon runs and of the Yukon River itself, effective management is restricted. For example, the various fisheries scattered over 1,400 river miles are harvesting mixed stocks usually several weeks and hundreds of miles from their spawning grounds. The Yukon commercial fishery is essentially a "cape fishery" (fishing on mixed stocks) and as a result some tributary populations may be under or overharvested in relation to their actual abundance. In a mixed stock fishery, where it is impossible to manage each stock separately, small spawning populations may be reduced to very low levels or even eliminated.

Due to the turbid water conditions of the main river (and some of its tributaries) and the vast size of the Yukon River drainage, accurate in-season assessment of the escapement immediately past the intensive downriver fishery is very difficult with the present available technology. Also, in-season management of the runs (often mixed species) is hampered by the variable run timing and pattern of entry into the lower river fishery which causes difficulties when attempting to analyze catch data. The usefulness of catch data analysis is also limited by recent changes in the commercial fishery. For example, some fishermen use small mesh gillnets (5 1/2 - 6 inch) during the king salmon season to harvest the larger run of summer chums in contrast to earlier years when 8-8 1/2 inch mesh gillnets were exclusively used. In addition the fishery has become more efficient (e.g. increased mobility, more fishermen operating drift gillnets, improved communications, etc.). As a result, catch data in recent years may not be comparable to earlier years.

Post season estimates of escapements in selected tributaries are being developed by establishing index areas. These estimates of spawning stocks, which may be limited by unfavorable stream and survey conditions (e.g. high water, inclement weather), are indicators of the total escapement. Comparable index stream estimates may eventually be of value in developing run forecasts.

5. Data Processing of Commercial Fishery Statistics. Lower Yukon River commercial catch and effort data analyses from fish tickets, obtained by a new micro-computer at the Emmonak field office, was utilized for in-season management purposes. Also, a separate program under contract to Old Dominion University was initiated to quantify migratory run timing by micro-computer analysis of commercial and test fishing data.

6. St. Mary's Field Office. The Assistant Area Management Biologist position was transferred to St. Mary's, which will facilitate public contact with fishermen groups.

7. Aerial Surveys of Salmon Spawning Streams. Aerial surveys were expanded to develop additional escapement index areas. King salmon spawning surveys were intensified in the Yukon Territory (Canada).

The Division of Commercial Fisheries of the Alaska Department of Fish and Game is responsible for the management of commercial and subsistence fisheries in the state. The permanent staff assigned full time to the Yukon area includes six positions - two area management biologists, one assistant area management biologist and three research biologists. In addition approximately 30 seasonal employees are hired each season to assist the permanent staff in conducting various management and research studies. Also, the staff aids in the enforcement of regulations in cooperation with the Division of Fish and Wildlife Protection (Department of Public Safety).

Operating funds allocated for the Yukon area salmon management and research program from July 1, 1981 through June 30, 1982 were $540,100. An additional $19,300 were allocated to conduct herring studies at Cape Romanzof.

In addition to the salmon and herring management and research programs, the staff works to obtain information to determine the potential for commercial fisheries on under-utilized species such as whitefish.

A unique problem in the lower river area is the language/communication barrier. Many of the older native people cannot read or speak English. Therefore, the staff often uses translators when conducting the many public meetings that are annually held throughout the area. While it may normally take only half an hour or so to conduct a public meeting or hearing in English, it usually takes two to three times that long when Eskimo translators are used. To assist in education and information, a weekly fishery program and special field announcements are broadcast during the fishing season over radio stations KNOM and KICY in Nome, KYUK in Bethel and various radio stations in the Fairbanks area.

Special Studies

Attachment 3 lists special studies undertaken during 1982 and includes a summary of objectives, procedures and results for each.

Commercial Fishery, 1982

Lower Yukon Area

The 1982 lower Yukon area (districts 1, 2 and 3) commercial salmon catch totaled 781,275 fish which was comprised of 116,192 king, 635,702 chum (435,822 summer and 199,880 fall chums) and 29,381 coho salmon.

Lower Yukon fishing effort, in terms of the actual number of participating fishermen, decreased slightly compared to 1981 (Appendix Table 4). In 1982 a total of 676 CFEC gillnet permits were issued for the lower Yukon area (Appendix Table 3).

King Salmon: The timing of the king salmon run entering the Yukon was late, countering the trend of the last four early years. Correspondingly, the breakup of the Yukon was also late. Large ice jams threatened flooding on many parts of the main river. The last ice jam, formed in the Sunshine Bay area, broke up on June 1st. The main river was essentially clear of ice by June 2nd. High water debris hampered fishing activity in early June. The first king was captured June 6 in the Department's test net at Big Eddy and also in a subsistence net near Alakanuk.

In accordance with the strategy set forth in the Yukon Area Management Plan, the earliest portion of the run was not commercially fished, to allow for escapement. Exercising the flexibility of the emergency order opening regulation adopted by the Board in 1981, the commercial season was opened on June 14 and 16 in districts 1 and 2, respectively. A regular schedule of two 24 hour fishing periods per week was established for each district.

In-season evaluation of commercial catch and catch per unit effort data as well as test fishing data indicated the king run to be of average size. Six and five 24 hour fishing periods were allowed in districts 1 and 2 respectively, which are managed together with a combined guideline harvest range of 60,000 to 120,000. On July 3rd in district 1 and July 2nd in district 2 the 6 inch or smaller mesh size restriction was announced. The combined commercial harvest of king salmon at that time was 106,399. Incidental harvest after the mesh restriction accounted for an additional 7,784 kings in districts 1 and 2 increasing the total catch to 113,582. The average weight for king salmon in the lower two districts was 23.0 lbs., a significant drop from the 1981 average weight of 25.5

Approximately 42% of the district 1 king catch was taken between Heads of Passes and Anuk River (statistical areas 17 and 18). This dramatic increase (33% in 1981, 23% in 1980) is reflective of the increasing effort and efficiency of the drift net fleet fishing in these areas. Catch by statistical area is shown in Appendix Table 5.

Comparative district 1 commercial king salmon catch and catch per unit effort data is presented in Appendix Tables 8 and 9.

Peak commercial king salmon catches in district 1 were made during the periods June 21-22 (19,925) and June 28-29 (18,173). In district 2 peak catches occurred during June 23-24 (11,861).

25,000 cohos) were taken during August 12-16 in districts 1 and 2. The commercial fishery season was closed August 18 with the lower Yukon area fall chum catch totalling 199,880. Catch by district was: 97,484 (district 1), 96,581 (district 2) and 5,815 (district 3). Following the closure of the season, fall chum test fishing catches sharply declined while coho salmon catches were above average.

Comparative fall chum salmon catch data for district 1 is shown in Appendix Tables 15 and 16.

Coho Salmon: The first coho reported was taken in the commercial fishery in district 1 on July 13. Cohos were first observed in the Department's test nets near Emmonak on July 18. However, their occurence in the commercial fishery was insignificant prior to August 9. As in other areas in western Alaska, the coho return in the Yukon was very good. The lower Yukon harvest of 29,381 was the third highest in history. The district 2 harvest of 14,179 set a new record for that district, nearly doubling their former record catch. Cohos are of secondary importance in the lower Yukon, as management is directed towards fall chums. Consequently harvest levels may reflect how late the season remained open, rather than the relative abundance of cohos.

A total of 14 processors operated in the lower Yukon in 1982. Seven processors bought fish in more than one district, indicating the high mobility of the tenderboat fleet. Nearly all of the salmon was shipped out to fresh or fresh frozen markets. One processor hard salted about 9,000 lbs. of salmon in district 1. In addition to the processors mentioned above, two fishermen sold fish as catcher/sellers.

Upper Yukon Area

During 1982 a total of 218,761 salmon (all species combined) was commercially harvested in districts 4, 5, and 6. This total was composed of 7,467 kings, 178,344 summer chums, 25,155 fall chums, and 7,795 cohos. These figures represent 22% of the total 1982 Yukon area production and are 42% below the recent 5-year average. In subdistrict 4-A (and to a lesser extent in other subdistricts), significant quantities of salmon roe were sold. Roe production was converted to "equivalent" numbers of salmon which are represented above and in accompanying tables. Table 13 presents actual numbers of salmon and pounds of salmon roe produced in the upper Yukon area during 1982.

Upper Yukon fishermen received an estimated $688,000 for their 1982 harvest. Of this total, approximately 61% ($423,000) was derived from salmon roe sales and the balance from salmon sold in the round. The value of the 1982 overall harvest declined 18% from the recent 5-year average of $838,000. Contributing factors were slightly lower prices than in recent years and the below-average chum runs experienced in 1982. Estimated (first) wholesale value of the 1982 pack was $1,720,000. During 1982, a total of 12 buyers and/or processors operated in the upper Yukon districts. Six processing plants have been established in the Interior, the majority of the catch is now processed within the area before being transported to outside markets.

During the 1982 season, 156 commercial fishermen made landings; this figure is 14% below the 1977-1981 average of 181 participating fishermen. It is thought that the below average chum runs experienced in 1982 influenced the amount and

Commercial catches of summer run chum salmon in district 5 totaled 234 fish. It should be noted, however, that summer chums are not normally abundant in this area, have little commercial value, and are normally retained for subsistence purposes. The king salmon fishery in this area is conducted primarily with large mesh (7-1/2 to 8-1/2") gillnets, and few chums are taken incidentally to kings.

The Tanana River summer chum catch of 23,000 was slightly below the recent 5-year average but likely would have been higher had there been normal levels of fishing and processing effort in the Nenana area. Catches peaked during the periods July 30-August 1 and August 2-4, when a total of 11,109 summer chums was harvested by 17 fishermen (Table 12).

Fall Chum Salmon: Fall chums began appearing in District 4 and in the lower portion of district 5 in early August. A reconnaissance survey of subdistricts 5-A, 5-B, and 5-C on August 12 revealed very low numbers of fall chums in those areas; a decision was made at that time to postpone the opening of the District 5 fishery until run strength improved. A second survey was made on August 19, and conversations with fishermen from the "Rapids" area upstream to the bridge indicated that run strength had still not improved. At this time, commercial catches in subdistrict 4-B were 78% below the recent 5-year average, and catch rates at the north-bank test wheel were running 74% below 1981 levels. On this basis, a decision was made to close the commercial fishery in subdistrict 4-B on August 20. During the period August 20-23, a boat survey of the district 5 fishery was conducted, which revealed continued poor fishing in that area. Reported subsistence catches from subdistrict 4-B indicated that run strength was declining further, and subsistence fishing time was reduced in that area and in District 5 to 3 days per week effective August 25.

South-bank subsistence and test catches indicated average run strength and a limited commercial fishing season was opened on August 14 in subdistrict 5-A.

At that time it was determined that the majority of the fall chum run had passed through subdistrict 4-B, and the restriction on the subsistence fishery was lifted.

The late portion of the upper Yukon fall run showed unexpected strength and on September 11 restrictions on the subsistence fishery were relaxed and two 24-hour commercial openings were announced. During these openings, a total catch of 5,392 fall chums was reported taken in subdistricts 5-B and 5-C. Restrictions on the subsistence and commercial fishery were gradually relaxed as this pulse of fish moved upriver.

Subdistricts 4-C and 5-A were closed September 14. Commercial fall chum catches from those areas were 3,083 and 8,286, respectively.

The commercial fishing season in the Tanana River (District 6) was opened on September 14 and closed on September 20; 72 hours of commercial fishing were allowed. The fall chum run was well below average in magnitude. A total of 7,416 fall chums and 7,780 cohos were reported taken in this fishery.

Coho Salmon: The coho run appears to be one of the strongest in recent years, as evidenced by their record numbers in the District 6 commercial fishery and

the catch of chums and cohos was similar to the 1977-1981 average of 323,644.

The recent trend toward increasingly large subsistence king salmon harvests appears to be largely a function of run size. Increases in the harvest of other species of salmon are attributed both to strong runs in recent years and, in part, to the increasing number of sled dog teams in the Interior.

The possibility of overestimating the summer chum harvest in district 4 should be noted. As indicated in a previous section of this report, many commercial fishermen in this area had no market for their chum salmon. As a result, many fishermen extracted and sold roe from their catch and retained the carcasses for their personal use. It is likely that in many cases fishermen (particularly in Anvik, Grayling, and Kaltag) reported this portion of their commercial catch as subsistence fish. It is not possible to quantify what portion of the catch may have been double counted.

Subsistence fishing permits are required in three general areas within the Yukon district: 1) the Tanana River drainage upstream of the Wood River confluence; 2) the Yukon River between Hess Creek and the Dall River; and 3) the Yukon River drainage between the upstream mouth of Twentytwo Mile Slough and the U.S./Canadian border. Tabular data on these permit fisheries are presented in Appendix Table 25.

Enforcement, 1982

Lower Yukon Area

Perhaps the most comprehensive enforcement effort ever seen on the lower Yukon was conducted in 1982. Two Fish and Wildlife Protection officers were stationed in Emmonak through the most intensive period of the fishery. Numerous contracts with fishermen were made. Many violation notices were issued and by mid-July, 6 convictions resulted. The most frequent violation documented was fishing with an unlicensed vessel.

Upper Yukon Area

Compliance with commercial and subsistence fishing regulations in the upper Yukon area continues to improve with increased surveillance by Fish and Wildlife Protection officers. The illegal sale of subsistence-caught salmon and salmon roe continues to be the most widespread problem. Other common violations include fishing during closed periods and unmarked fishing gear.

Escapement, 1982

The Yukon River drainage is too extensive for complete aerial surey escapement coverage during any given season. In addition, poor survey conditions prevented surveys from being flown during some years or have resulted in minimum estimates. Table 15 presents aerial survey escapement data for all streams surveyed in 1982. Figures 2-6 show major tributary systems and important spawning streams.

Appendix Tables 26 and 27 presents comparative king salmon escapement data for selected tributaries during the 1959-1982 period. Aerial surveys of king salmon spawning streams in the Alaskan portion of the drainage were severely limited due to turbid water conditions and inclement weather. King salmon

are 4-year old fish. Based on comparative catch and escapement information, the 1979 brood year (4-year olds) was considered above average in magnitude. The return of 5-year olds (1978 brood year) is not expected to be significant because of the weak return of 4-year old fish in 1982. In summary, the 1983 Yukon River fall chum salmon run is expected to be average in magnitude. The expected commercial harvest should approximate 233,000 fish, the midpoint of the guideline harvest range for the entire river.

The fall chum commercial harvest may be further reduced due to additional regulatory restrictions in order to ensure that adequate subsistence and escapement requirements are met.

Coho Salmon

Four-year-old fish (1979 brood year) are the dominant age class. Adequate escapement information for coho salmon is lacking but surveys in the Tanana River system indicated above average escapements in 1979. The return in 1983 is expected to be of similar magnitude. The coho salmon commercial catch is expected to total 20-30,000 fish, depending on amount of fishing effort exerted on the fall chum run and the duration of the fishing season.

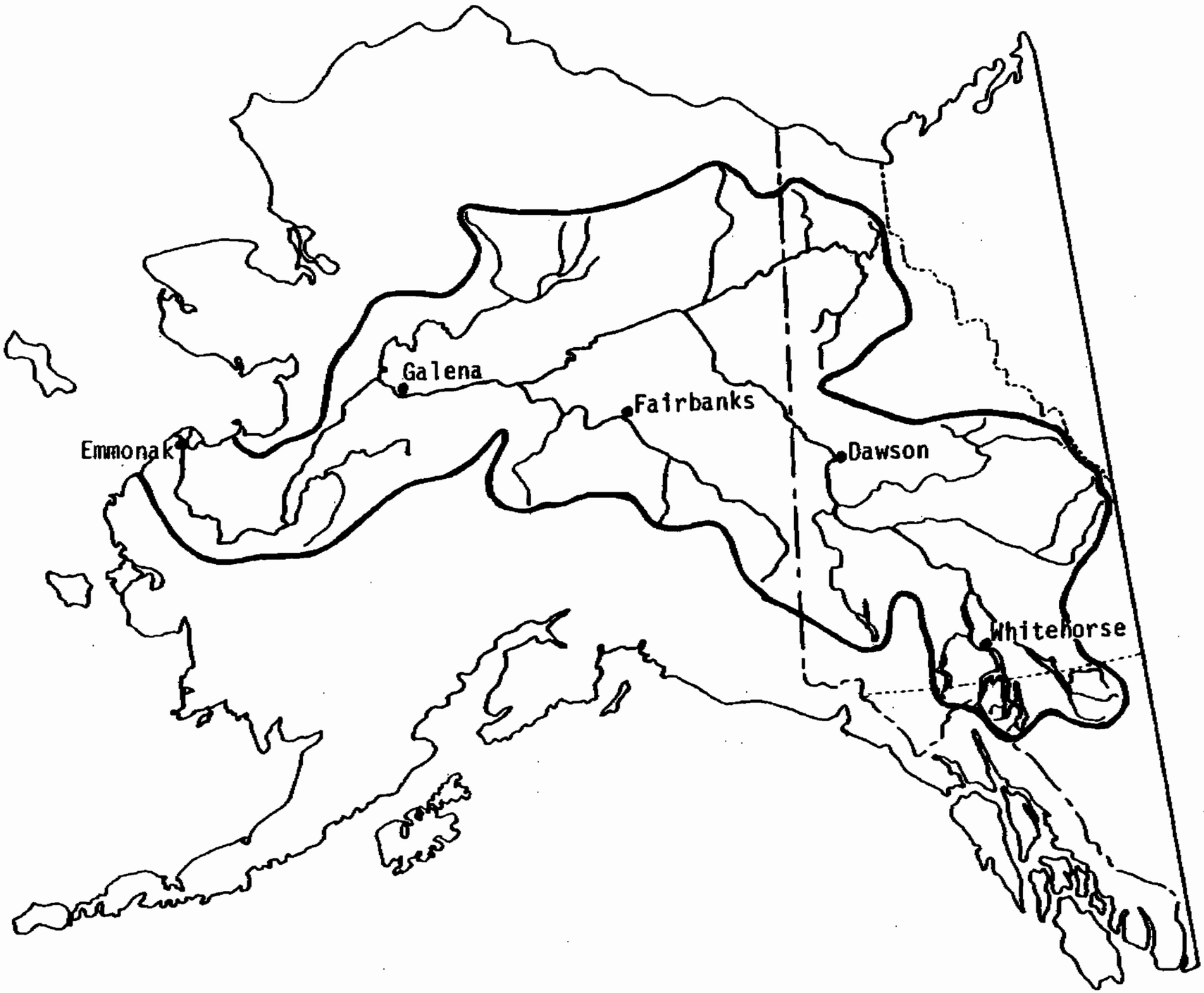


Figure 1. The Yukon River drainage, 330,000 square miles.

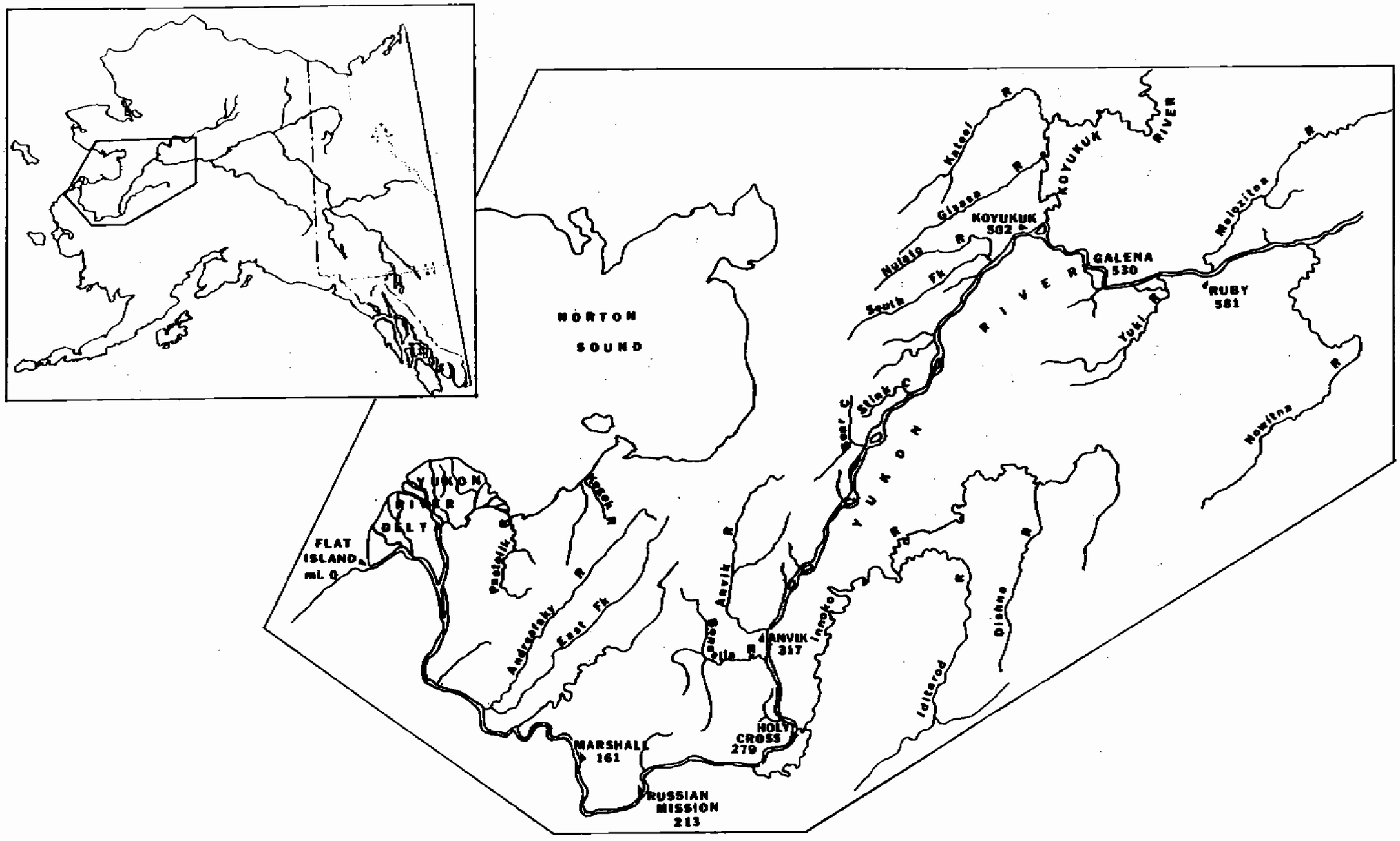


Figure 2. The lower Yukon River drainage.

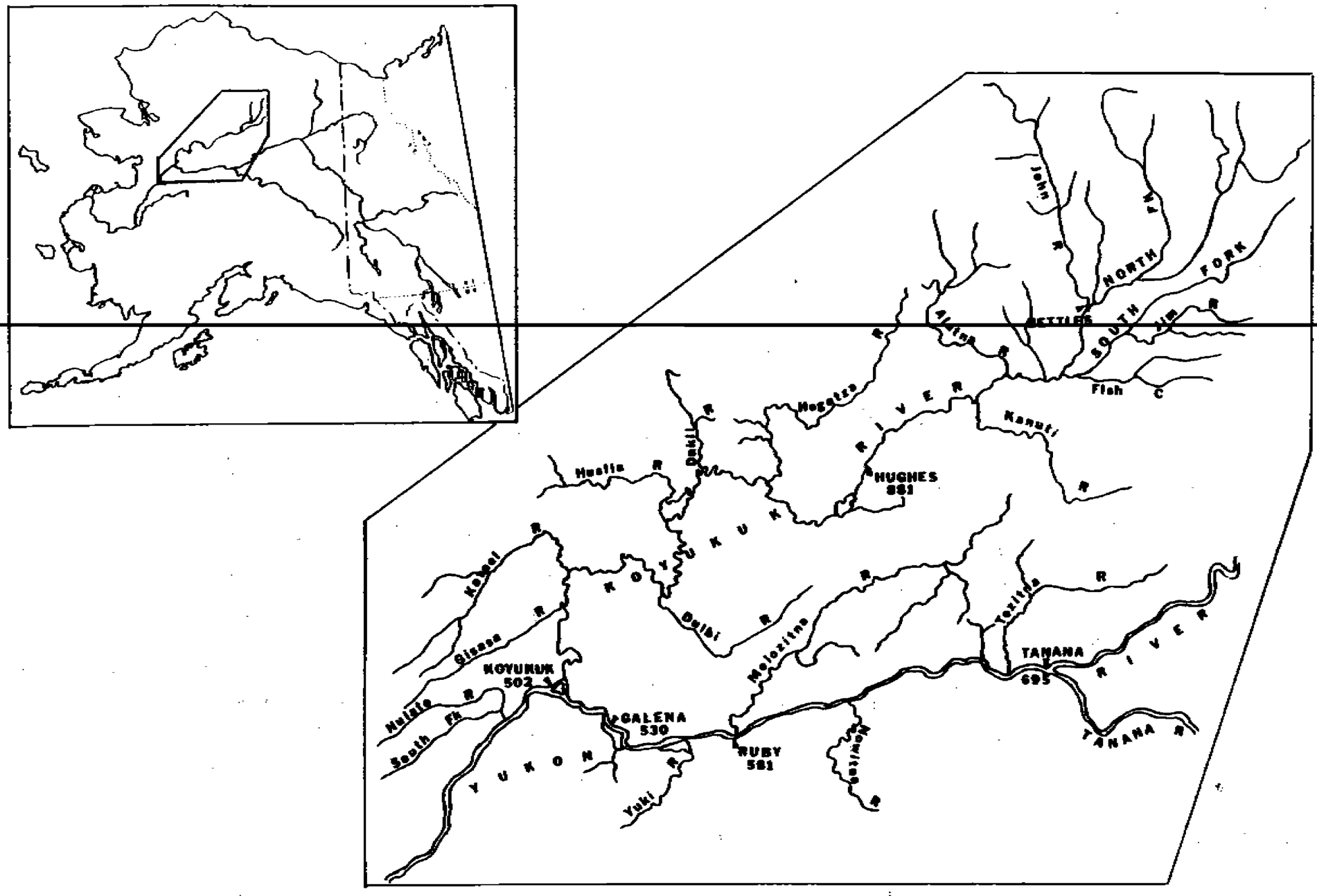


Figure 3. The Koyukuk River drainage.

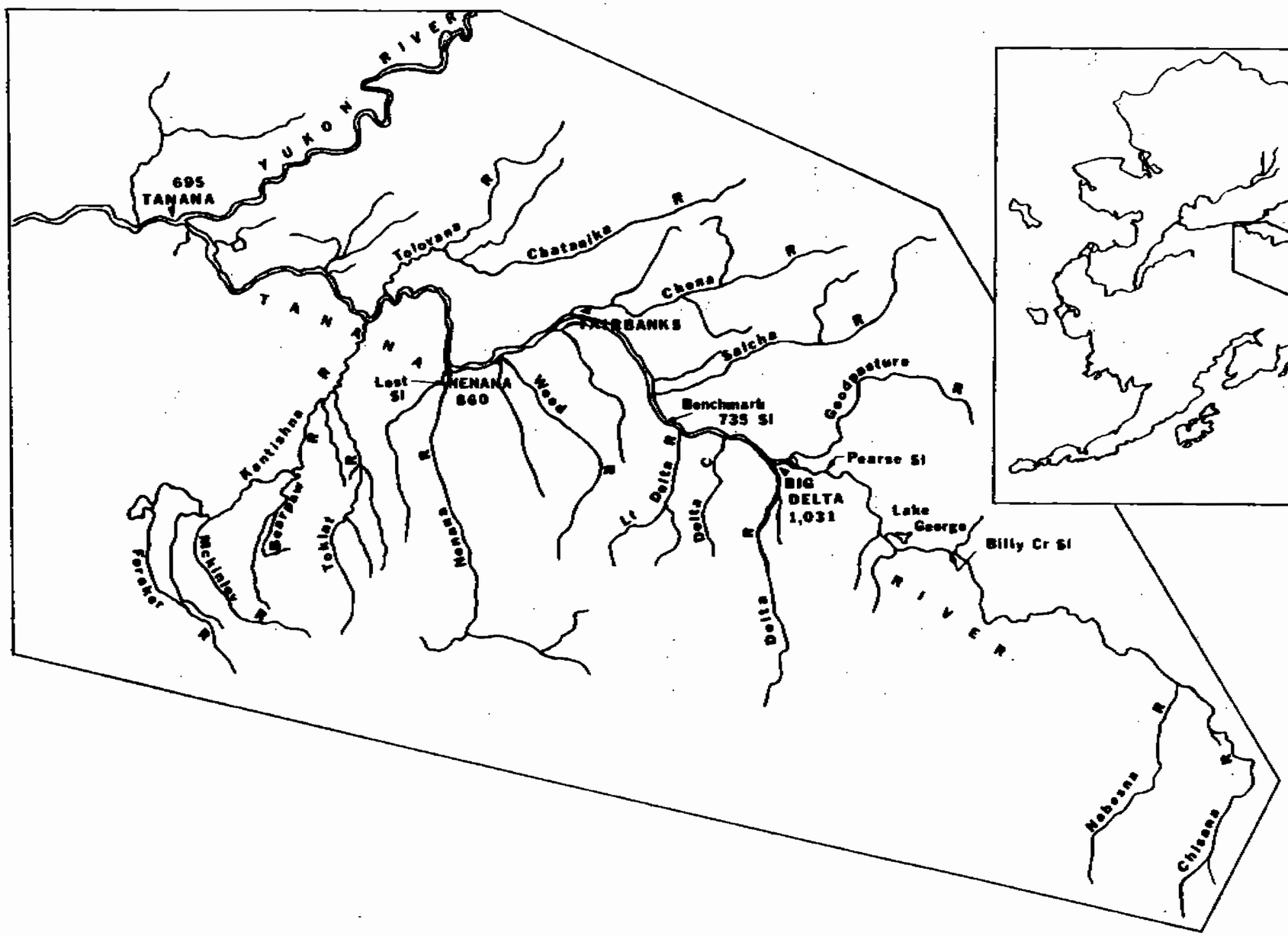


Figure 4. The Tanana River drainage.

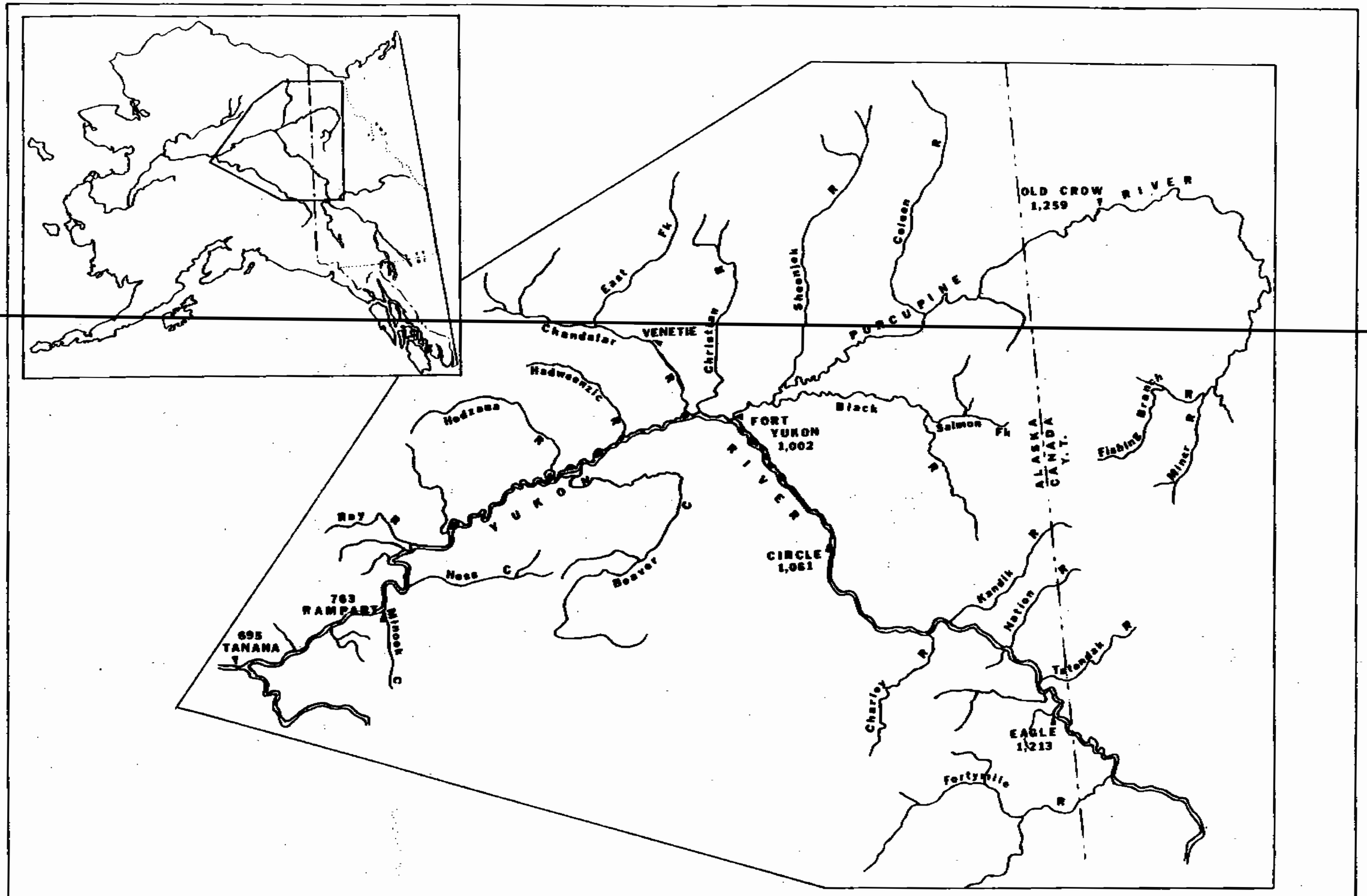


Figure 5. The middle Yukon River and Porcupine River drainage.

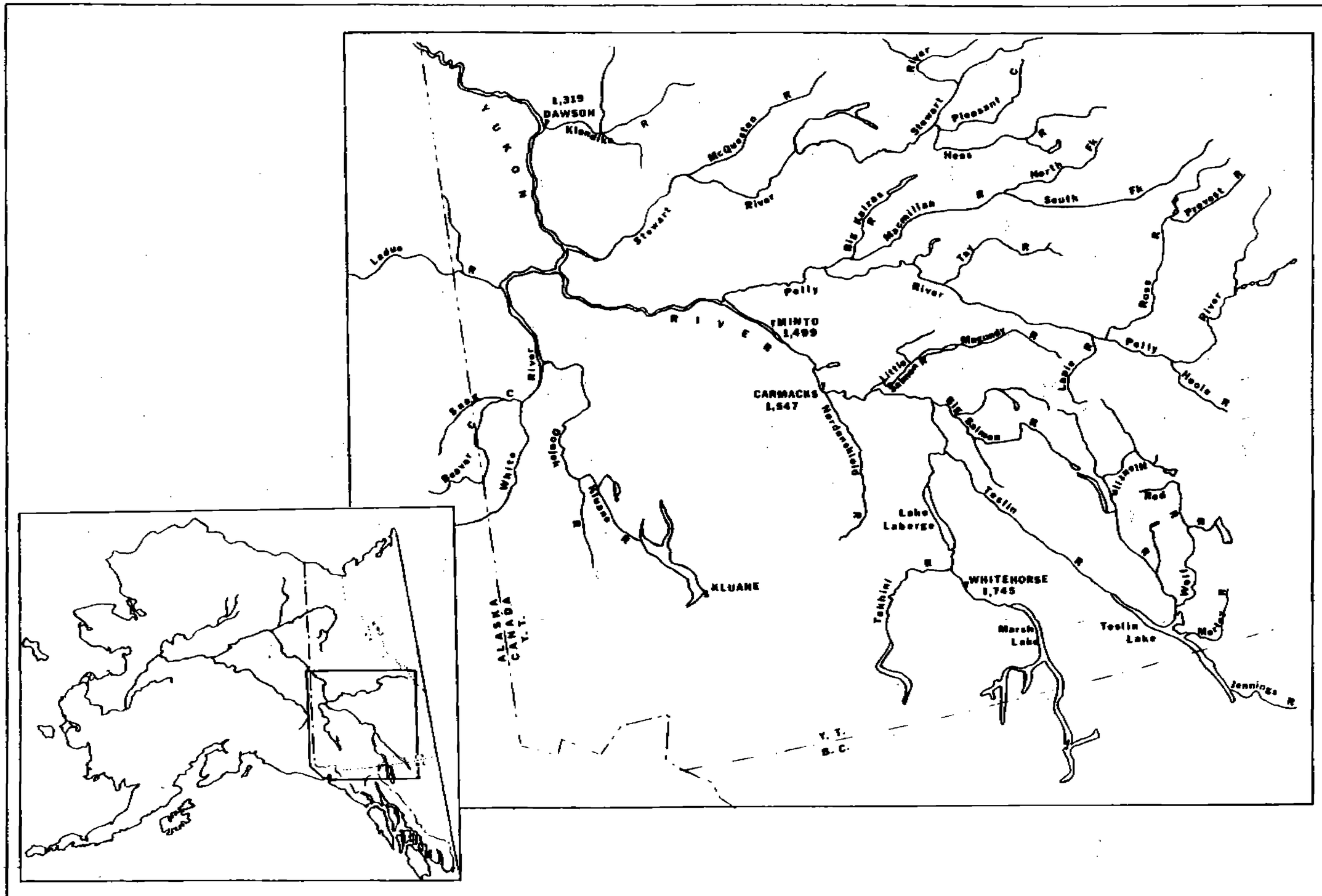
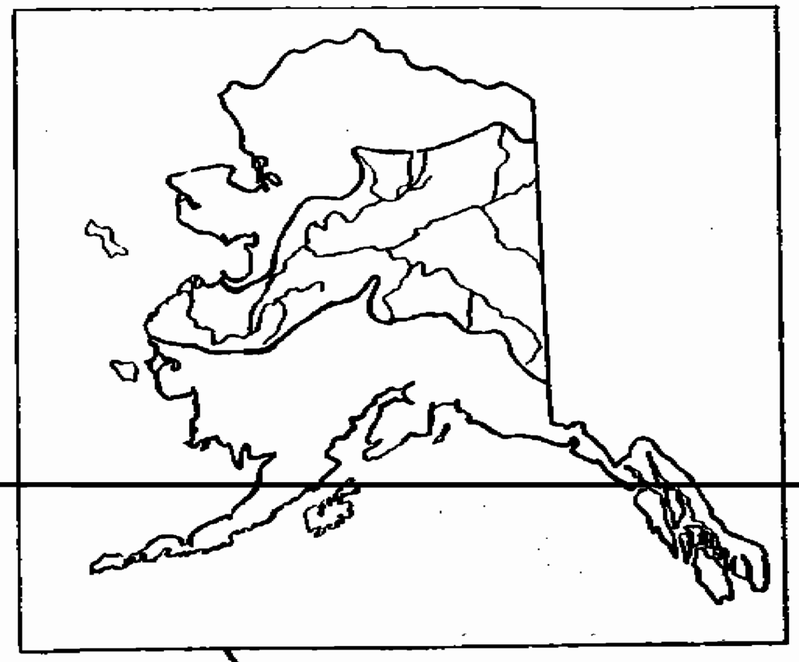


Figure 6. The upper Yukon River drainage.



Norton Sound

Koyukuk

Kaltag

Galena

Ruby

Tanana

Rampart

Manley

Ft Yukon

Circle

Fairbanks

Nenana

Eagle

Emmonak

Mt Village

Anvik

Marshall

Holy Cross

4A

4B

4C

5A

5B

5C

5D

6A

6B

6C

1

2

3

UPPER YUKON

LOWER YUKON

YUKON MANAGEMENT AREA
DISTRICTS 1-6

FIGURE 7

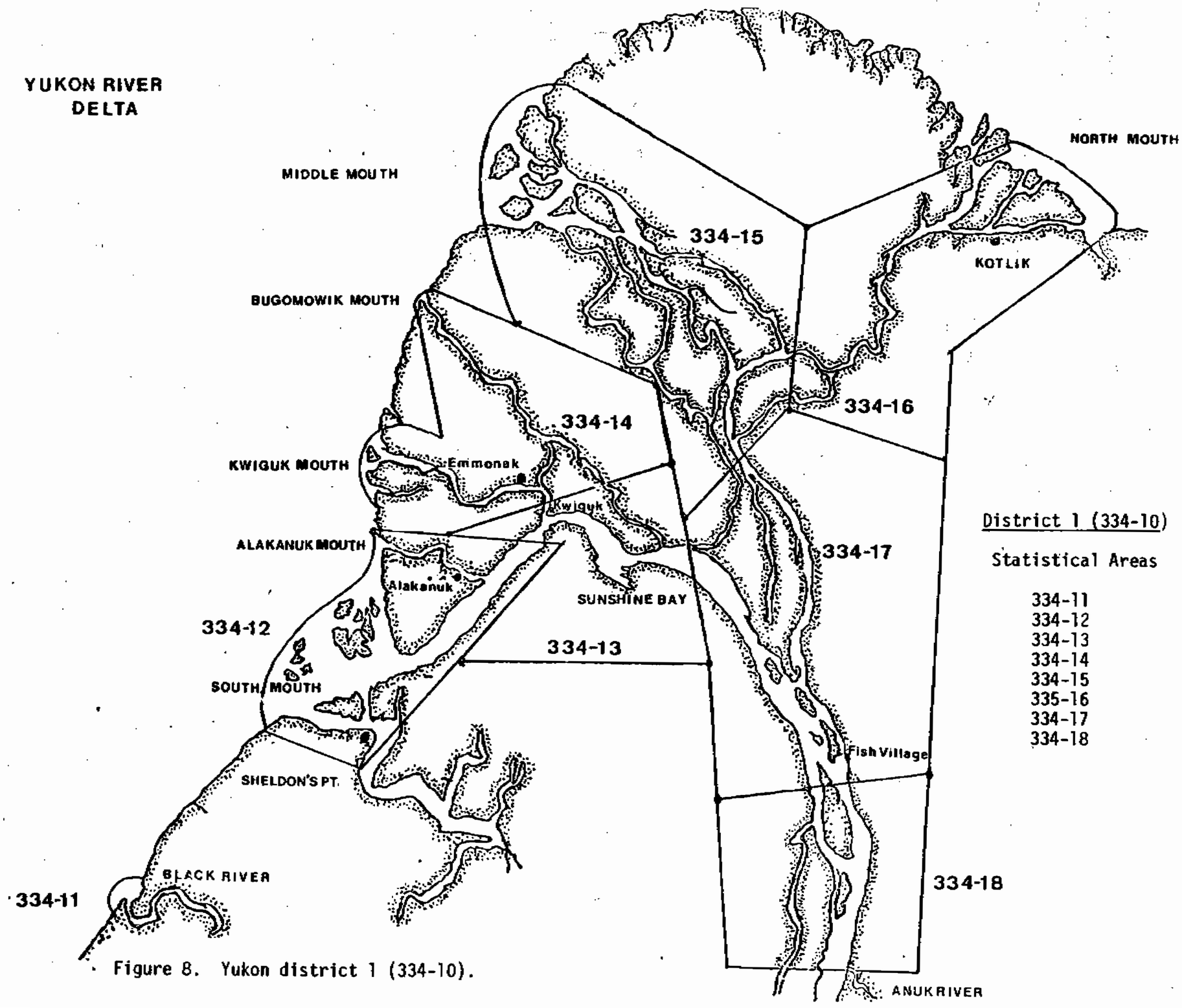
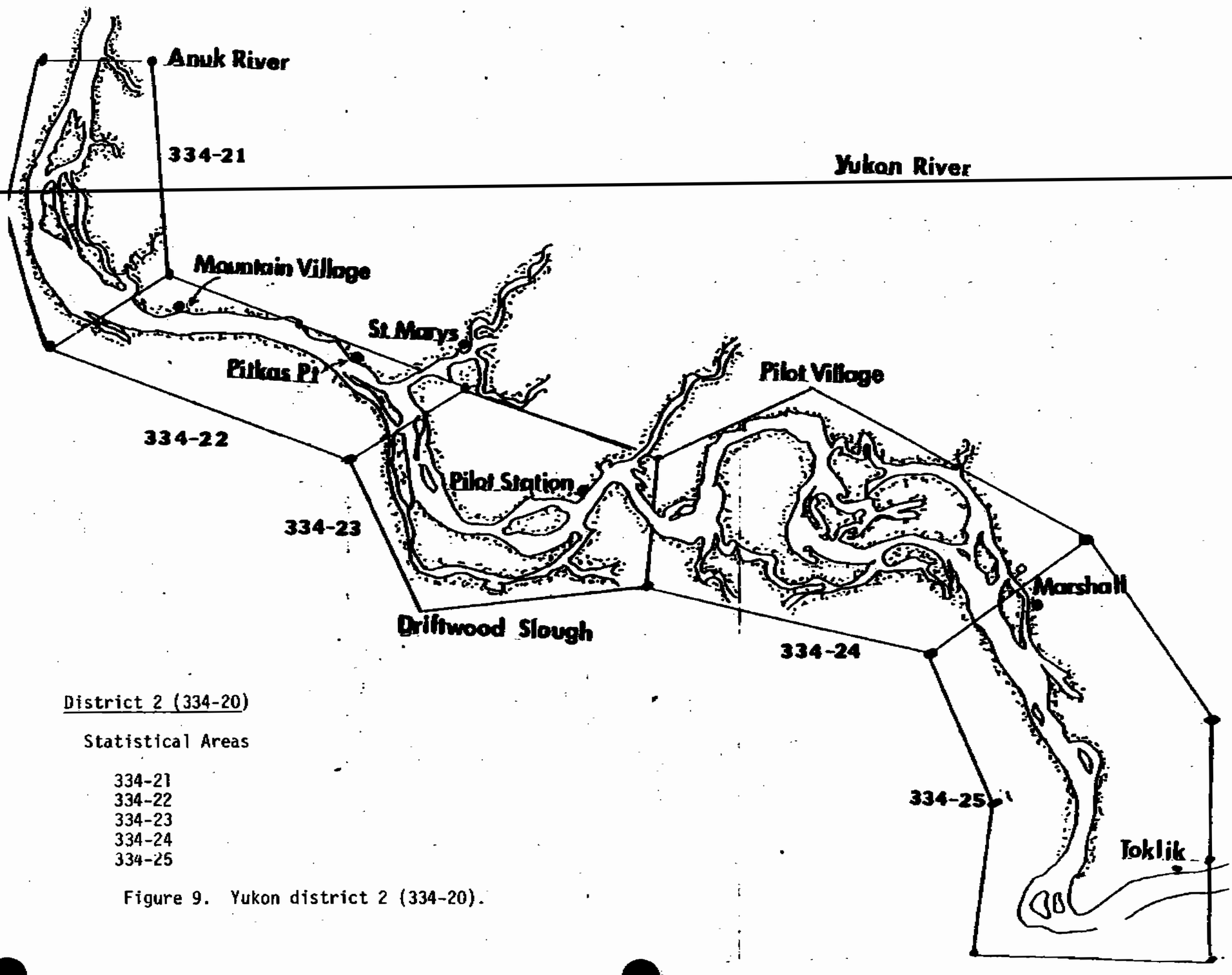


Figure 8. Yukon district 1 (334-10).

District 1 (334-10)

Statistical Areas

334-11
334-12
334-13
334-14
334-15
335-16
334-17
334-18



District 2 (334-20)

Statistical Areas

334-21
334-22
334-23
334-24
334-25

Figure 9. Yukon district 2 (334-20).

District 3 (334-30)

Statistical Areas

334-31
334-32

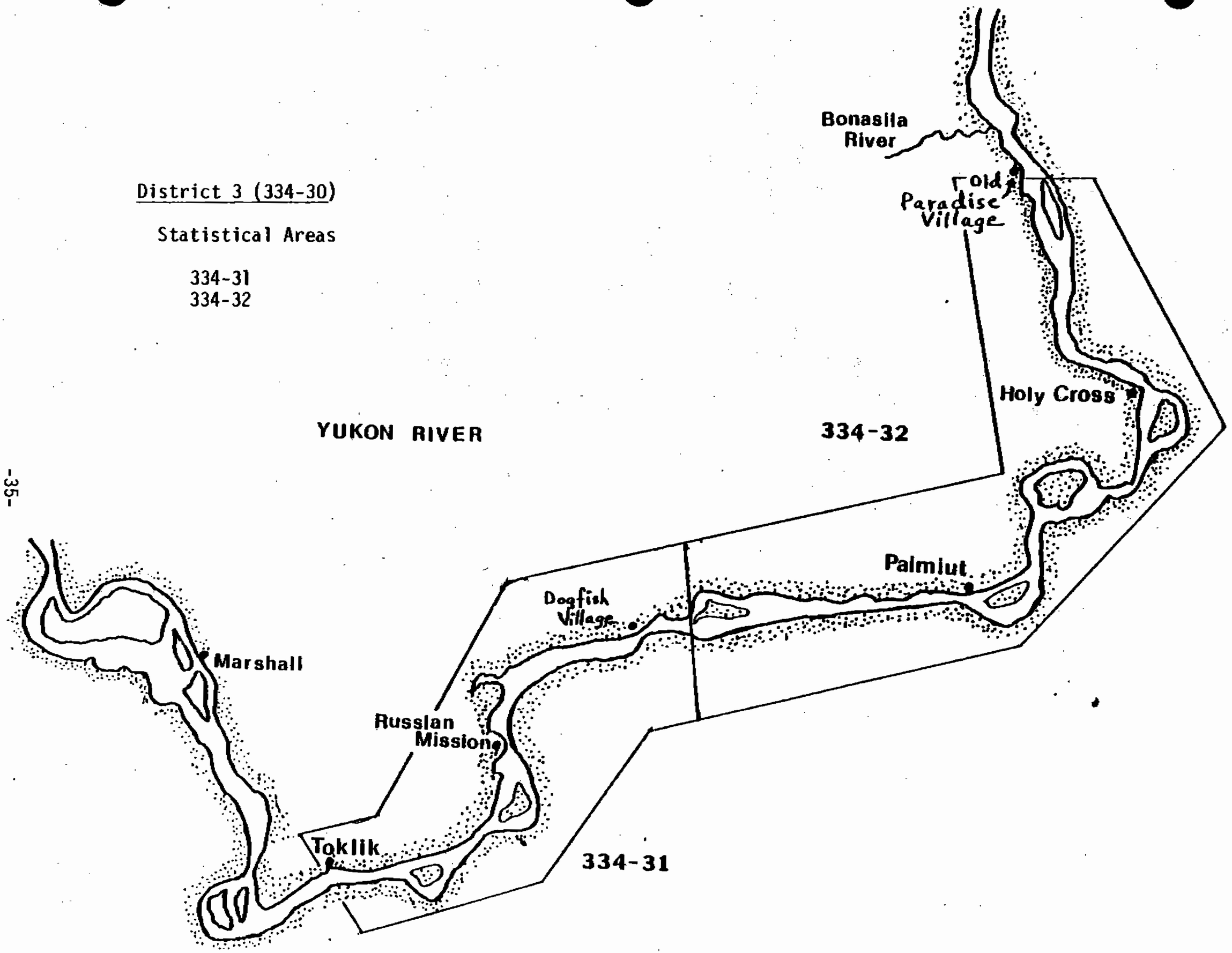
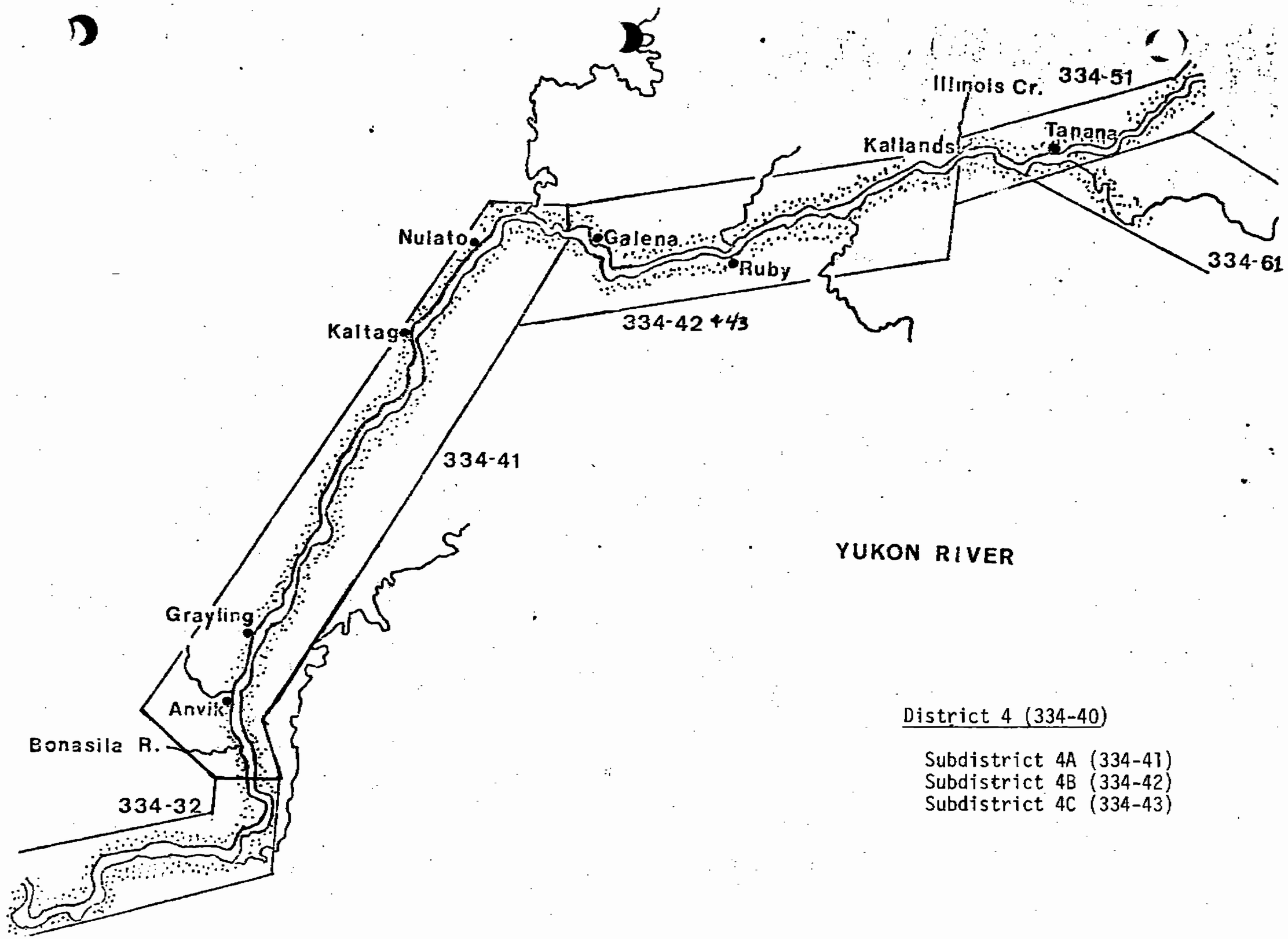


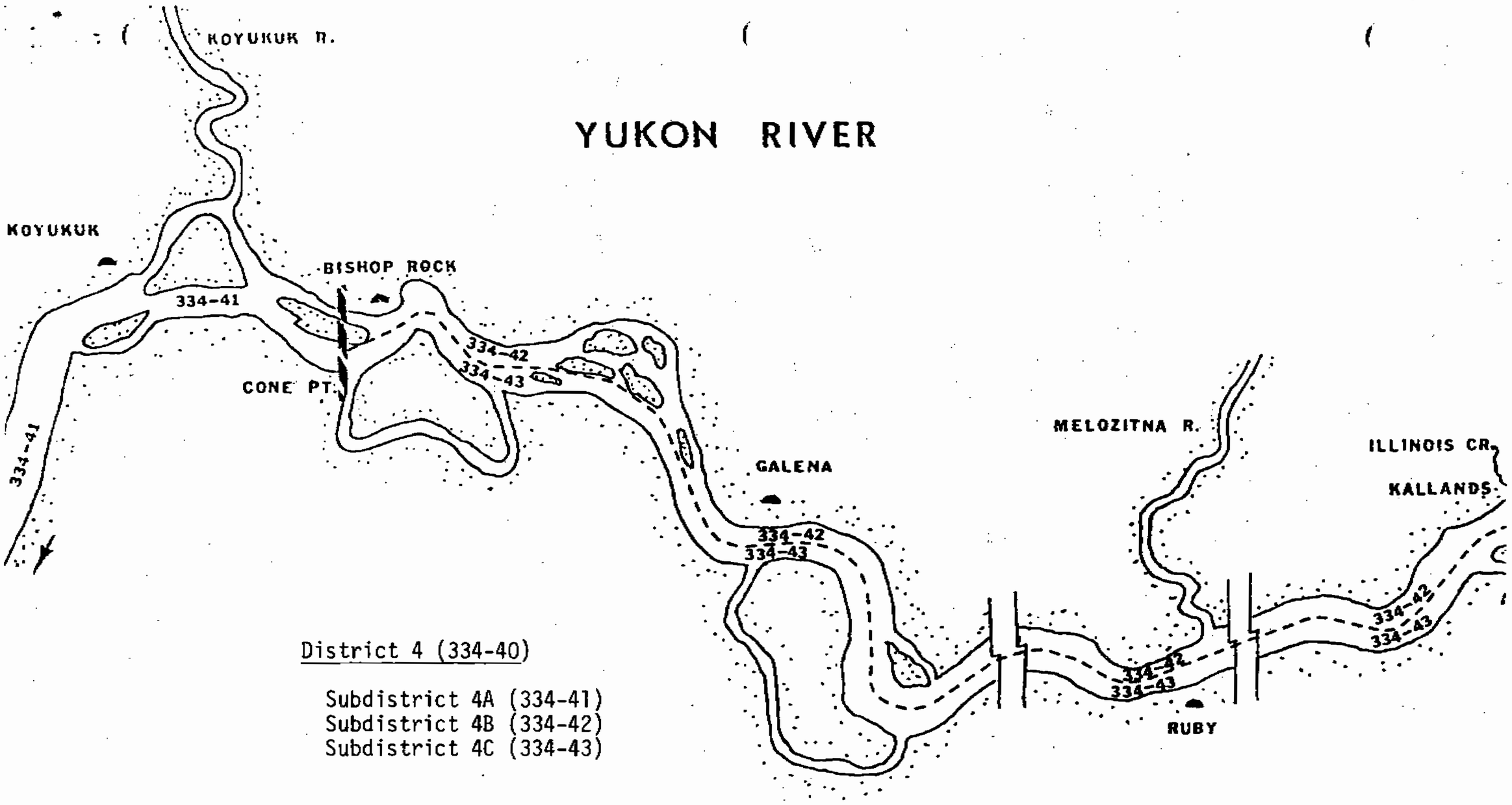
Figure 10. Yukon district 3 (334-30)



District 4 (334-40)

Subdistrict 4A (334-41)
Subdistrict 4B (334-42)
Subdistrict 4C (334-43)

Figure 11. Yukon district 4 (334-40).



District 4 (334-40)

Subdistrict 4A (334-41)
Subdistrict 4B (334-42)
Subdistrict 4C (334-43)

Figure 12. Yukon district 4 (334-40).

District 5: 334-50

Subdistrict 5A (334-51)
Subdistrict 5B (334-52)
Subdistrict 5C (334-53)
Subdistrict 5D (334-54)

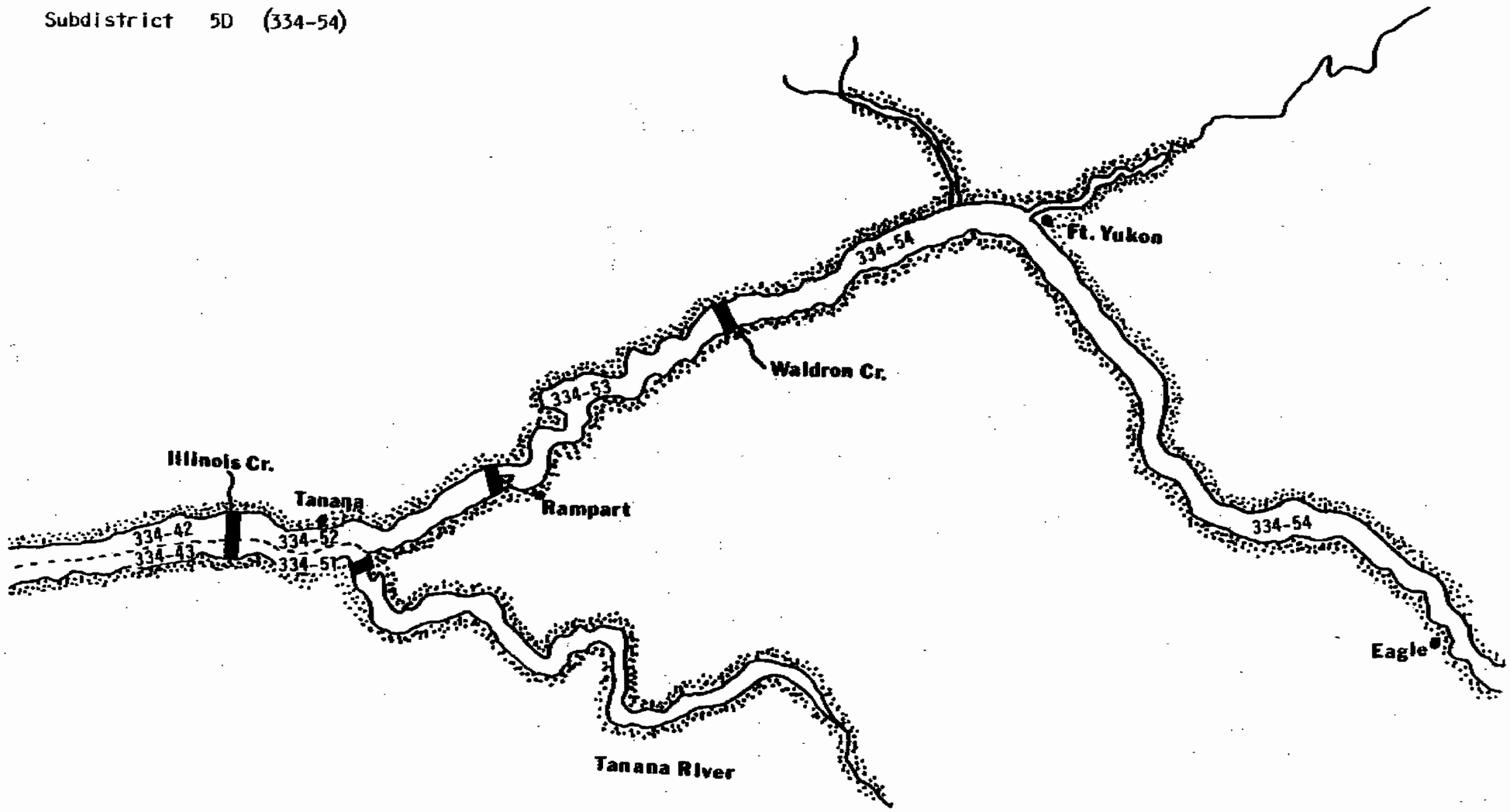
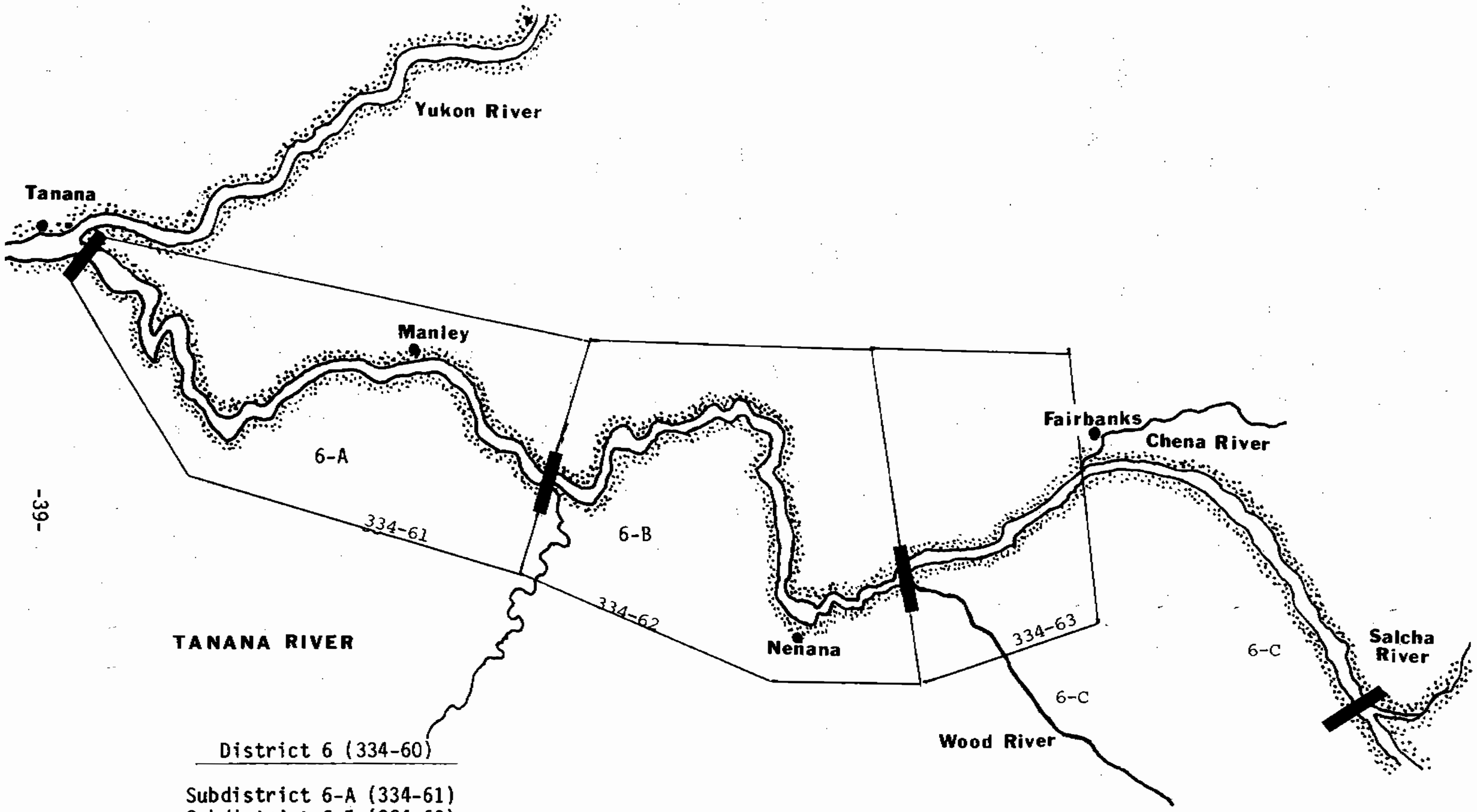


Figure 13. Yukon district 5 (334-50).



District 6 (334-60)

Subdistrict 6-A (334-61)
Subdistrict 6-B (334-62)
Subdistrict 6-C
Wood River to Chena R. (334-63)

Figure 14. Yukon district 6.

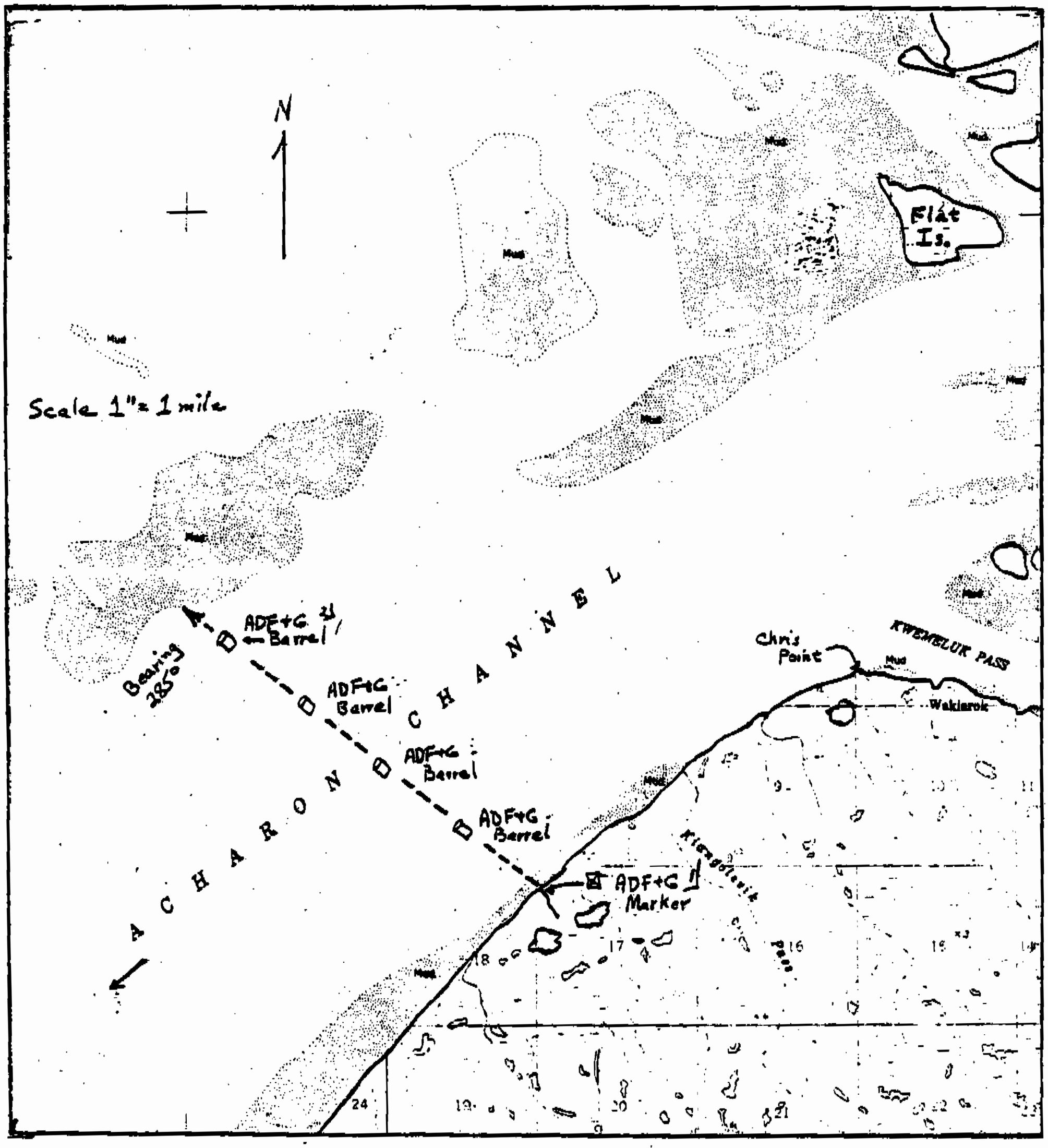


Figure 15. Closed waters Acharon Channel, south mouth Yukon River. (5AAC 05.350. CLOSED WATERS. (1) Acharon Channel of the south mouth area of the Yukon River west of a 2-1/2 nautical mile long line bearing 285° from an ADF&G regulatory marker located below Chris Point to the opposite side of the channel; the line may be marked by a series of yellow and green barrels placed by the Department between shore markers).

1/ ADF&G Regulatory Marker Sign, erected 5' height with driftwood logs, located on river bank at terminus of rivulet between two lakes approximately 2-1/2 miles below Chris Point.

2/ ADF&G yellow and green 55 gal. barrels anchored offshore.

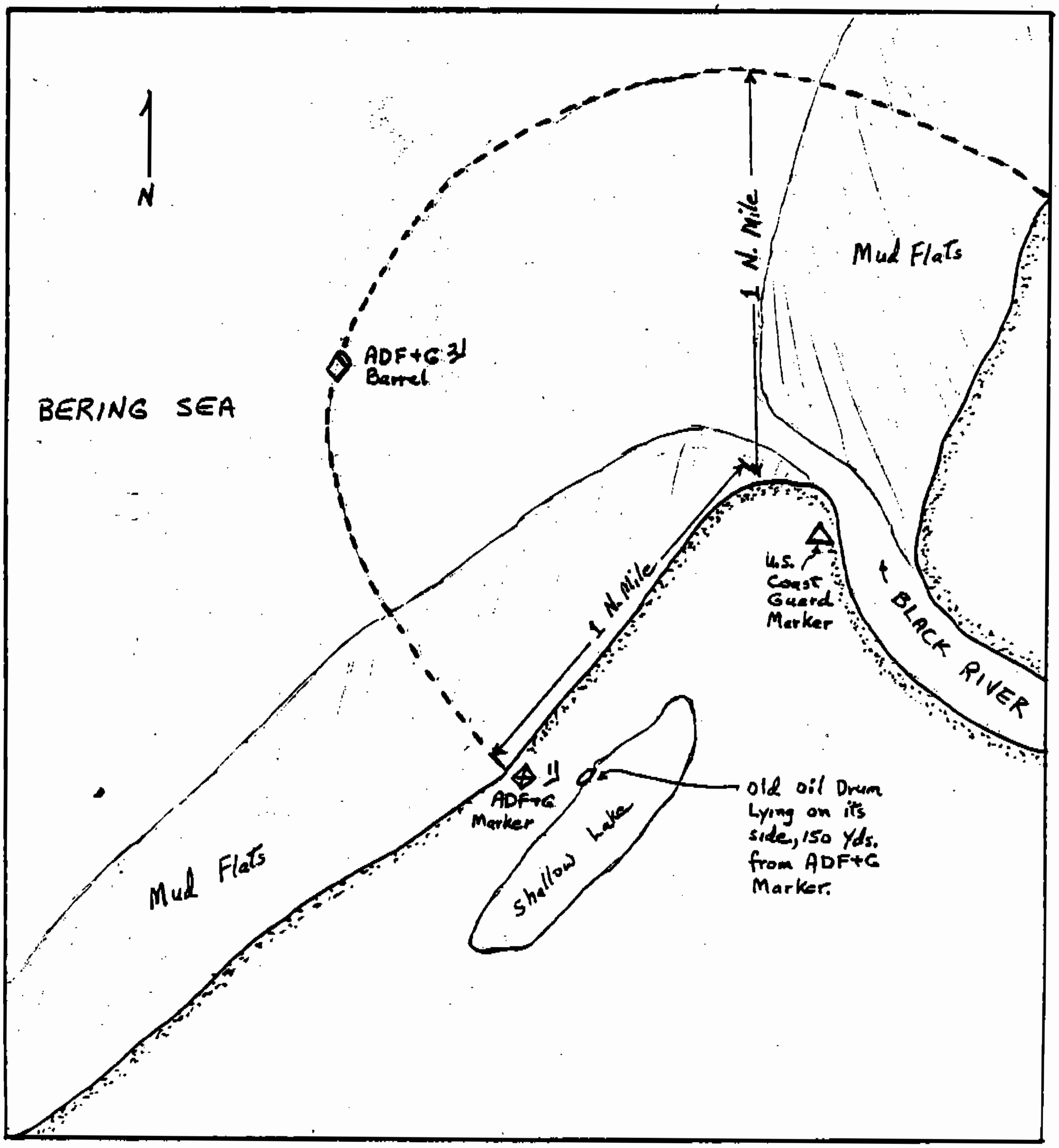


Figure 16. Closed waters of Black River mouth. (5AAC 05.350. CLOSED WATERS. (3) waters west of a one nautical mile radius from the mouth of Black River).

1/ ADF&G Regulatory Marker Sign erected 6' height with driftwood logs.

2/ ADF&G yellow and green 55 gal. barrel anchored 1 nautical mile offshore.

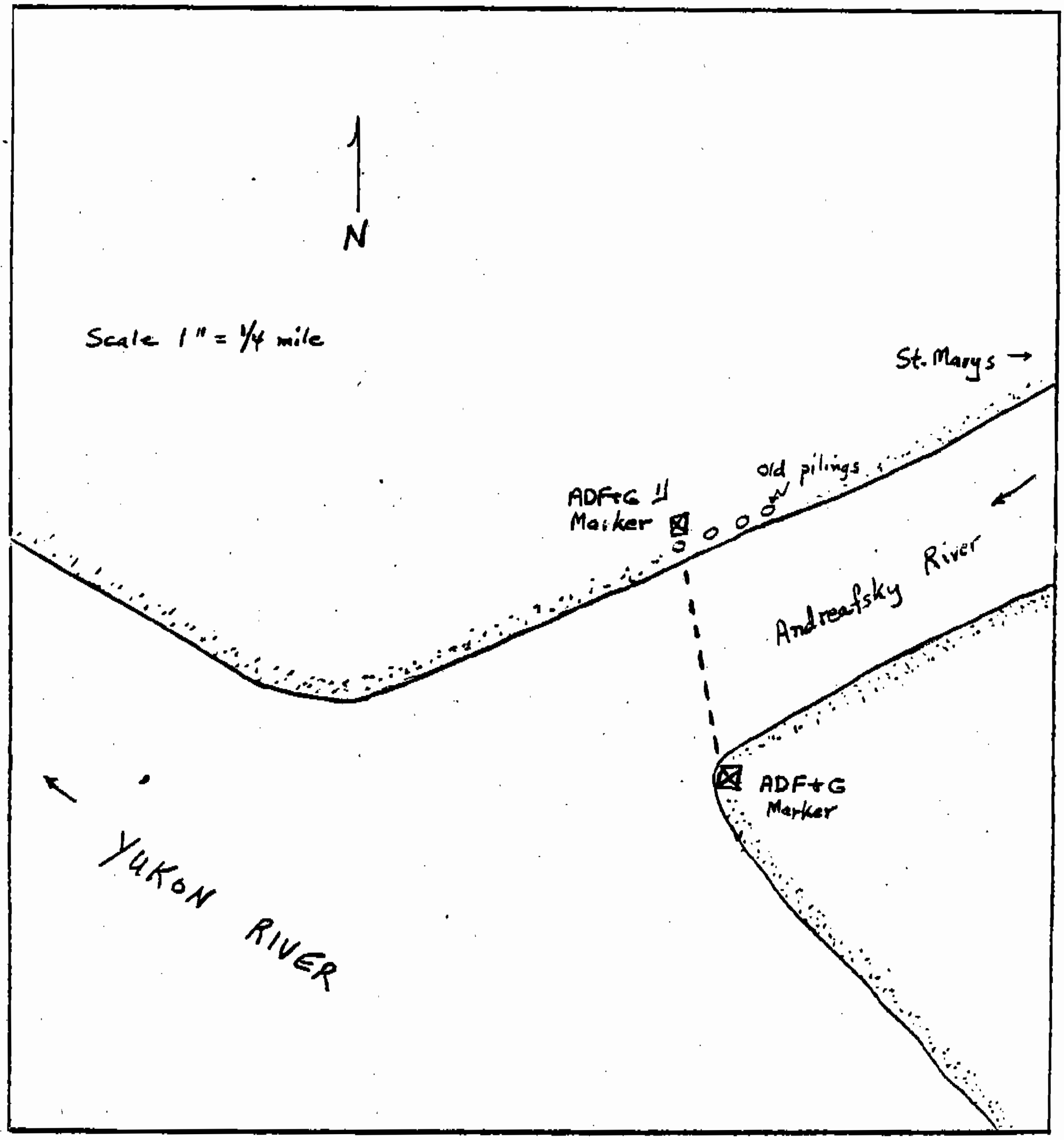


Figure 17. Closed waters of Andreafsky River mouth. (5AAC 05.350. CLOSED WATERS. (4) waters of the Andreafsky River upstream of a line from Department regulatory markers placed on each side of the river at its mouth).

1/ North bank ADF&G regulatory marker sign attached to 4th wooden piling stump downstream.

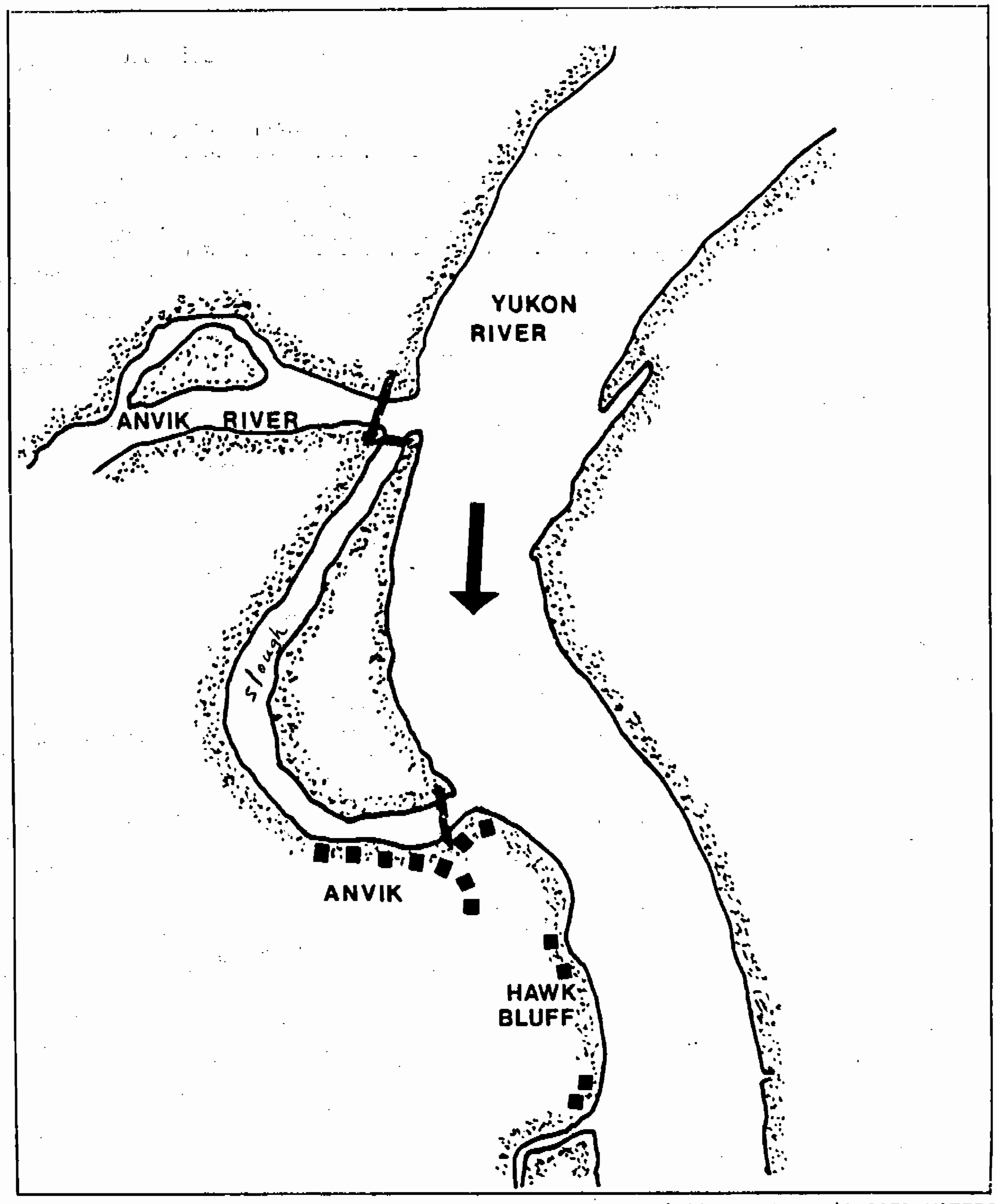


Figure 18. Closed waters of Anvik River mouth. (5AAC 05.350. (CLOSED WATERS.(8) waters of the Anvik River upstream of a line between department regulatory markers placed on each side of the river at its mouth). Markers (6) placed north and south banks of the Anvik River mouth and at upstream and downstream mouths of slough (Old Anvik River Channel).

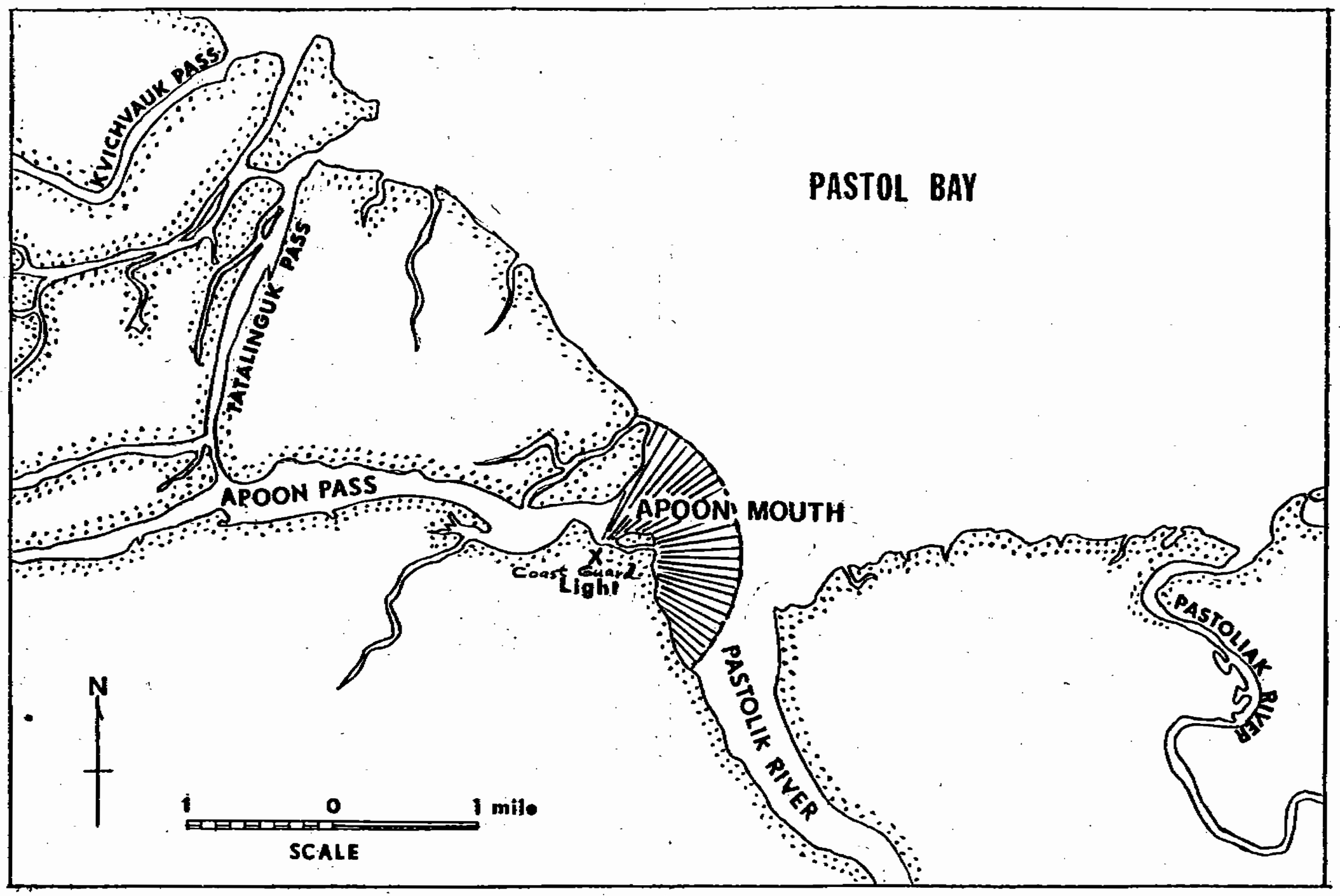


Figure 19. Closed waters of Apoon Mouth, Yukon River (5 AAC 05.350. CLOSED WATERS. (9) Waters east of a one nautical mile radius from a U.S. Coast Guard light at the mouth of Apoon Pass).

Table 1. List of indigenous fishes found in the Yukon area. 1/

Species Code	Scientific Name	Common Name
601	Lampetra japonica	Arctic lamprey
570	Stenodus leucichthys	Sheefish
581	Coregonus nasus	Broad Whitefish
582	Coregonus pidschian	Humpback Whitefish
583	Coregonus sardinella	Least Cisco
585	Coregonus laurettae	Bering Cisco
586	Prosopium cylindraceum	Round Whitefish
587	Prosopium coulteri	Pygmy Whitefish
610	Thymallus arcticus	Arctic Grayling
550	Salvelinus namaycush	Lake Trout
520	Salvelinus alpinus	Arctic Char
530	Salvelinus malma	Dolly Varden
410	Oncorhynchus tshawytscha	King Salmon
420	Oncorhynchus nerka	Red Salmon
430	Oncorhynchus kisutch	Coho Salmon
440	Oncorhynchus gorbuscha	Pink Salmon
450	Oncorhynchus keta	Chum Salmon
513	Osmerus mordax dentex	Rainbow Smelt
514	Hypomesus olidus	Pond Smelt
500	Esox lucius	Pike
630	Dallia pectoralis	Blackfish
650	Couesius plumbeus	Lake Chub
640	Catostomus catostomus	Longnose Sucker
670	Percopsis omiscomaycus	Trout-perch
590	Lota lota	Burbot, Lush
661	Pungitius pungitius	9-spine Stickleback
162	Cottus cognatus	Slimy Sculpin
	ESTUARINE	
113	Eleginus gracilis	Saffron Cod
121	Pleuronectes stellatus	Starry Flounder
122	Liopsetta glacialis	Arctic Flounder
230	Clupea pallasii	Pacific Herring
	Mallotus villosus	Capelin

1/ Includes fishes found in the Yukon River drainage in Canada.

Table 2 . Yukon River Drainage Mileages

Location	Mileages from Mouth
North Mouth (Apoon Pass)	
Kotlik	6
Hamilton	26
Middle Mouth (Kwikpak, Kawanak Pass)	
Choolunawick	16
Akers Camp	26
New Hamilton	34
South Mouth (Kwikluak Pass)	
Mouth, Black River	-18
Flat Island	0
Sheldon Point	5
Tin Can Point	8
Alakanuk	17
Emmonak-Kwiguk (Kwiguk Pass)	24
Sunshine Bay	24
Aproka Pass (upstream mouth)	35
Kwikpak Pass (upstream mouth)	44
Head of Passes	48
Fish Village	52
Mouth Anuk River (District 1/2 Boundary)	63
Patsys Cabin	71
Mountain Village	87
Old Andreafsky	97
Pitkas Point	103
Mouth, Andreafsky River	104
St. Marys	107
Pilot Station	122
Mouth, Atchuelinguk (Chulinak) River	126
Pilot Village	138
Marshall (Fortuna Ledge)	161
Upstream Mouth Owl Slough	163
Ingrihak	170
Ohogamut	185
Toklik (District 2/3 Boundary)	191
Kakamut	193
Russian Mission	213
Dogfish village	227
Paimuit	251
Mouth, Innoko River (South Slough)	274

Shageluk	328
Holikachuk	383
Holy Cross	279
Mouth, Koserefski River	286
Old Paradise Village (District 3/4 Boundary)	301
Mouth, Bonasila River	306
Anvik	317
Mouth, Anvik River	318
Grayling	336
Mouth, Thompson Creek	349
Blackburn	370
Eagle Slide	402
Mouth, Rodo River	447
Kaltag	450
Mouth, Nulato River	483
Nulato	484
Koyukuk	502
Mouth, Koyukuk River	508
Mouth, Gisasa River	564
Huslia	711
Mouth, Dakli River	755
Mouth, Hogatza River	780
Hughes	881
Mouth, Kanuti River	935
Alatna (Mouth, Alatna River)	956
Allakaket	956
Mouth, South Fork	986
Mouth, John River	1,117
Bettles	1,121
Middle Fork	1,141
Cold Foot	1,174
Wiseman	1,186
Bishop Rock	514
Prospect Point	519
Galena	530
Whiskey Creek	555
Mouth, Yuki River	562
Ruby	581
Mouth, Melozitna River	583
Horner Hot Springs	605
Kokrines	608
Mouth, Nowitna River	612
Birches	647
Kallands - Mouth of Illinois Creek (District 4/5 Boundary)	664
Mouth, Tozitna River	681
Tanana Village	695
Mouth, Tanana River (District 5/6 Boundary)	695
Manley Hot Springs	765
Mouth, Kantishna River	793
Mouth, Toklat River	838
Mouth, Sushana River	850
Mouth, Bearpaw River	887
Outlet, Lake Minchumina	959

Minto	835
Nenana	860
Mouth, Nenana River	860
Mouth, Wood River	894
Rosie Creek Bluffs	912
Mouth, Chena River (Fairbanks)	920
Mouth, Salcha River	965
Benchmark #735 Slough	991
Mouth, Little Delta River	1,000
Mouth, Delta Creek	1,014
Mouth, Clear Creek (Richardson-Clearwater)	1,015
Mouth, Shaw Creek	1,021
Mouth, Delta River (Big Delta)	1,031
Delta Junction	1,041
Mouth, Goodpaster River	1,049
Bluff Cabin Slough	1,050
Outlet, Clearwater Lake	1,052
Mouth, Clearwater Creek, (Delta Clearwater)	1,053
Mouth, Gerstle River	1,059
Outlet, Healy Lake	1,071
Outlet, Lake George	1,086
Tanacross	1,128
Outlet, Tetlin Lake	1,188
Mouth, Nabesna River	1,210
Northway Junction	1,214
Mouth, Chisana River	1,215
Mouth, Sheep Creek	1,297
Rampart Rapids	731
Rampart	763
Mouth, Hess Creek	789
Mouth, Ray River	817
Highway Bridge - Pipeline Crossing	820
Mouth, Dall River	841
Stevens Village	847
Mouth, Hodzana River	897
Beaver	932
Mouth, Hadweenzic River	952
Mouth, Chandalar River (Venetie Landing)	982
Venetie	1,025
Fort Yukon	1,002
Mouth, Porcupine River	1,002
Mouth, Black River	1,026
Chalkyitsik	1,084
Mouth, Salmon River	1,142
Mouth, Salmon Trout River	1,193
Mouth, Sheenjek River	1,054
Mouth, Coleen River	1,157
U.S.-Canadian Border	1,219
Old Crow	1,259
Fishing Branch River spawning area	1,600
Circle	1,061
Woodchopper	1,110
Mouth, Charley River	1,124

Mouth, Kandik River	1,135
Mouth, Nation River	1,166
Mouth, Tatonduk River	1,186
Mouth, Seventymile River	1,194
Eagle	1,213
U.S.-Canadian Border	1,224
Mouth Fortymile River	1,269
Dawson	1,319
Mouth, Klondike River	1,320
Mouth, Sixty Mile River	1,369
Mouth, Stewart River	1,375
McQuesten	1,455
Stewart Crossing	1,491
Mayo	1,520
Mouth, Hess River	1,594
Mouth, White River	1,386
Mouth, Donjek River	1,455
Mouth Kluane River	1,541
Outlet Kluane Lake	1,587
Burwash Landing	1,595
Kluane	1,625
Fort Selkirk	1,477
Mouth, Pelly River	1,478
Pelly Crossing	1,410
Mouth, MacMillan River	1,442
Ross River	1,602
Minto	1,499
Mouth, Tatchun Creek	1,530
Carmacks	1,547
Mouth, Little Salmon River	1,583
Mouth, Big Salmon River	1,621
Mouth, North Big Salmon River	1,641
Mouth, South Big Salmon River	1,657
Outlet, Big Salmon Lake	1,714
Mouth, Teslin River	1,654
Roaring Bull Rapids	1,707
Johnson's Crossing (Outlet, Teslin Lake)	1,756
Teslin	1,780
Mouth Nisutlin River	1,788
Mouth, Sidney Creek	1,837
Mouth, Hundred Mile Creek	1,851
Mouth, McNeil River	1,887
Outlet, Nisutlin Lake	1,892
Outlet, Lake Laberge	1,679
Inlet, Lake Laberge	1,712
Mouth, Takhini River	1,718
Whitehorse	1,745
Mouth, M'Clintock River	1,769
Outlet, Marsh Lake	1,764
Outlet, Little Atlin Lake	1,788
Outlet, Atlin Lake	1,812
Atlin	1,844
Tagish	1,786
Outlet, Tagish Lake	1,788
Carcross (Outlet Lake Bennett)	1,810
Bennett	1,835

Table 3. Yukon area processors and associated data, 1982.

Commercial Operator (Processing location/buying station)	Product	District
Lafayette, Inc. 1425 Bank of Calif. Center Seattle, WA 98164 (M/V Lafayette, M/V Western Pioneer, M/V Northwind and M/V Theresa Marie)	Sac Roe Herring (Frozen)	Cape Romanzof
Offshore Fisheries 3601 Gilman Ave. W. Seattle, WA 98199 (M/V Westward Wind, M/V Express, M/V Cordova, M/V Arctic Dreamer and M/V Alaskan Enterprise)	Sac Roe Herring (Frozen)	Cape Romanzof
Yukon Delta Fish Marketing Co-op Inc. Emmonak, Alaska 99581 (Emmonak)	Frozen Salmon Kings Cohos Chums Salmon Roe	1 and 2
Amukon Trading Post Scammon Bay, Alaska 99662 (Black River)	Hard salt Kings Chums	1
Bering Sea Fisheries, Inc. 19849 8th N.W. Seattle, WA 98177 (Lamont Slough)	Frozen salmon and canned (#1 talls) Kings Cohos Chums Salmon roe	1 and 2
Whitney Fidalgo Seafoods (Mokuhona Fisheries) 4401 International Airport Road Anchorage, Alaska 995023 (Aproka Pass)	Fresh salmon Kings Chums Salmon roe	1 and 2
Schenk Seafood Sales, Inc. P.O. Box 984 Bellingham, WA 98225 (Lamont Slough)	Frozen salmon Kings Cohos Chums Salmon roe	1 and 2
Trinity Seafodds, Inc. 129 Viewcrest Port Angeles, WA 98362 (St. Marys)	Fresh salmon Chums Kings Cohos	2

Table 3. (Continued)

Commercial Operator (Processing location/buying station)	Product	District
Cook Inlet Processing, Inc. 1035 W. Northern Lights Blvd. Anchorage, Alaska 99503 (Kotlik)	Fresh Salmon Kings Chums	1
Azachorak Corp., DBA The Village Cannery Mountain Village, Alaska 99632 (Mt. Village)	Fresh/frozen salmon Kings Chums Cohos Salmon roe	1 and 2
Boreal Fisheries 24320 - 70th Ave. E. Graham, WA 98338 (Old Andreafsky)	Fresh salmon Kings Chums Cohos Salmon roe	2
Nakamura & Associates 811 First Avenue, #400 Seattle, WA 98104 (Marshall)	Fresh salmon Kings Chums Cohos Salmon roe	2 and 3
Harry Turner Box 97 Holy Cross, Alaska 99602 (Paimiut)	Smoked salmon strips Kings	3
Y-K Fisheries Aniak, Alaska 99557 (Pitkas Point and Russian Mission)	Fresh salmon Kings Chums Cohos Salmon roe	2 and 3
Western Yukon Fisheries Box 131 St. Marys, Alaska 99658	Fresh salmon Kings Chums	2
Fish Products Limited (Chet Clark) Box 517 Aniak, Alaska 99557 (Paimuit/Holy Cross)	Fresh salmon Kings Chums Cohos Salmon roe	3

Table 3. (Continued)

Commercial Operator (Processing location/buying station)	Product	District
Huntington Fisheries P.O. Box 49 Galena, Alaska 99741 (Galena)	Fresh salmon Kings Chums Salmon roe	4
Walton Co., Inc. General Delivery Anvik, Alaska 99558 (Anvik)	Salmon roe	4
Grayling Air Service General Delivery Grayling, Alaska 99590 (Grayling)	Salmon roe	4
Kaltag Fishermen's Association General Delivery Kaltag, Alaska 99748 (Kaltag)	Fresh salmon Chums salmon roe	4
Kotzebue-Norton Sound Development Co., Inc. 520 Northern Federal Building 386 Wehasha St. Paul., MN 55102 (Unalakleet)	Fresh salmon Chums Salmon roe	4
Cold Sea Fisheries P.O. Box 82 Dillingham, Alaska 99576 (Galena)	Salmon roe	4
McCann's Fish P.O. Box 133 Tanana, Alaska 99777 (Tanana)	Salmon roe	4 and 5
Chena Marina Fish Co. SR Box 10407-B Fairbanks, Alaska 99701 (Fairbanks)	Fresh salmon Chums Kings	5

Table 3. (Continued)

Commercial Operator (Processing location/buying station)	Product	District
Stevens Fisheries P.O. Box 38 Nenana, Alaska 99760 (Nenana)	Fresh salmon Kings Chums Cohos Salmon roe	5 and 6
Nyquist Investments P.O. Box 10497 Fairbanks, Alaska 99707 (Fairbanks)	Fresh salmon Kings Chums	5
Yutana Fisheries P.O. Box 82455 Fairbanks, Alaska 99708 (Manley Hot Springs)	Fresh salmon Kings Chums Salmon roe	5 and 6
Bastien Bros.-Interior Fisheries 5222 Camden Road Madison, WI 53716 (Manley Hot Springs)	Fresh salmon Kings Chums Cohos Salmon roe	4 and 5

Table 4. Commercial salmon catches by species and district, Yukon area, 1982.

District	Kings	Summer Chums	Fall Chums	Total Chums	Cohos	Total All Species
334-10						
King salmon season (6/14-7/2)	70,743	155,988	0	155,988	0	226,731
Summer chum salmon season (7/5-7/15)	3,455	93,390	0	93,390	1	96,846
Fall chum salmon season (7/16-8/13)	253		97,484	97,484	15,114	112,851
Total 334-10	74,451	249,378	97,484	346,862	15,115	436,428
334-20						
King salmon season (6/16-7/1)	35,656	69,118	0	69,118	0	104,774
Summer chum salmon season (7/4-7/18)	3,342	113,240	0	113,240	0	116,582
Fall chum salmon season (7/19-8/16)	134	0	96,581	96,581	14,179	110,894
Total 334-20	39,132	182,358	96,581	278,939	14,179	332,250
334-30						
King salmon season (6/28-7/6)	2,608	4,086	0	4,086	0	6,694
Fall chum salmon season (7/26-8/18)	1	0	5,815	5,815	87	5,903
Total 334-30	2,609	4,086	5,815	9,901	87	12,597
TOTAL LOWER YUKON	116,192	435,822	199,880	635,702	29,381	781,275
334-40						
King salmon season (6/20-8/13)	1,107	154,928	0	154,928	0	156,035
Fall chum salmon season (8/15-9/10)	0	0	4,061	4,061	15	4,076
Total 334-40	1,107	154,928	4,061	158,989	15	160,111
334-50						
King salmon season (6/25-8/1)	5,379	234	0	234	0	5,613
Fall chum salmon season (9/4-9/15)	0	0	13,678	13,678	0	13,678
Total 334-50	5,379	234	13,678	13,912	0	19,291
334-60						
King salmon season (7/2-8/8)	981	23,182	0	23,182	0	24,163
Fall chum salmon season (9/14-9/19)	0	0	7,416	7,416	7,780	15,196
Total 334-60	981	23,182	7,416	30,598	7,780	39,359
TOTAL UPPER YUKON	7,467	178,344	25,155	203,499	7,795	218,761
GRAND TOTAL YUKON AREA	123,659	614,166	225,035	839,201	37,176	1,000,036

Table 5. Yukon area commercial salmon catches by statistical area, 1982.

Statistical Area	King Salmon Season 1/ King	King Salmon Season 1/ Chum	Summer Chum Salmon Season 2/ King	Summer Chum Salmon Season 2/ Chum	Summer Chum Salmon Season 2/ Coho	Fall Chum Salmon Season 3/ King	Fall Chum Salmon Season 3/ Chum	Fall Chum Salmon Season 3/ Coho	Total King	Total Chum	Total Coho
334-11	3,435	9,816	4	55	0	1	51	7	3,440	9,922	7
12	10,729	48,253	485	17,668	0	54	17,224	2,106	11,268	83,145	2,106
13	2,678	12,227	163	3,017	0	1	2,509	659	2,842	17,753	659
14	8,418	22,119	603	17,479	0	17	15,197	4,374	9,038	54,795	4,374
15	8,785	18,338	490	18,757	0	56	19,537	3,777	9,331	56,632	3,777
16	6,753	2,430	492	10,161	0	50	8,011	675	7,295	20,602	675
17	17,437	26,560	697	14,956	0	51	18,737	1,990	18,185	60,253	1,990
18	12,508	16,245	521	11,297	1	23	16,218	1,526	13,052	43,760	1,526
Subtotal 334-10	70,743	155,988	3,455	93,390	1	253	97,484	15,114	74,451	346,862	15,115
334-21	9,910	11,386	634	23,409	0	23	25,830	7,985	10,567	60,625	7,985
22	7,704	33,122	1,479	42,012	0	53	28,555	4,737	9,236	103,689	4,737
23	4,908	7,569	334	7,799	0	20	12,232	537	5,262	27,600	537
24	8,203	10,517	698	28,562	0	31	22,606	758	8,932	61,685	758
25	4,931	6,524	197	11,458	0	7	7,358	162	5,135	25,340	162
Subtotal 334-20	35,656	69,118	3,342	113,240	0	134	96,581	14,179	39,132	278,939	14,179
334-31	895	1,934	0	0	0	1	1,962	28	896	3,896	28
32	1,713	2,152	0	0	0	0	3,852	59	1,713	6,005	59
Subtotal 334-30	2,608	4,086	0	0	0	1	5,815	87	2,609	9,901	87
TOTAL LOWER YUKON	109,007	229,192	6,797	206,630	1	388	199,880	29,380	116,192	635,702	29,381
334-41	4/ 78	138,643	0	0	0	0	0	0	78	138,643	0
42	509	13,609	0	0	0	0	978	0	509	14,587	0
43	520	2,676	0	0	0	0	3,083	15	520	5,759	15
Subtotal 334-40	1,107	154,928	0	0	0	0	4,061	15	1,107	158,989	15
334-51	61	21	0	0	0	0	8,286	0	61	8,307	0
52	2,339	213	0	0	0	0	1,083	0	2,339	1,296	0
53	2,284	0	0	0	0	0	4,309	0	2,284	4,309	0
54	695	0	0	0	0	0	0	0	695	0	0
Subtotal 334-50	5,379	234	0	0	0	0	13,678	0	5,379	13,912	0
334-61	414	4,982	0	0	0	0	706	1,004	414	5,688	1,004
62	309	13,498	0	0	0	0	5,182	6,449	309	18,680	6,449
63	258	4,702	0	0	0	0	1,528	327	258	6,230	327
Subtotal 334-60	981	23,182	0	0	0	0	7,416	7,780	981	30,598	7,780
TOTAL UPPER YUKON	7,467	178,344	0	0	0	0	25,155	7,795	7,467	203,499	7,795
GRAND TOTAL YUKON AREA	116,474	407,536	6,797	206,630	1	388	225,035	37,175	123,659	839,201	37,176

1/King Salmon Season

334-10	6/14-7/2
334-20	6/16-7/1
334-30	6/28-7/6
334-40	6/20-8/13
334-50	6/25-8/1
334-60	7/2-8/8

2/Summer Chum Salmon Season

334-10	7/5-7/15
334-20	7/4-7/18

3/Fall Chum Salmon Season

334-10	7/16-8/13
334-20	7/19-8/16
334-30	7/26-8/18
334-40	8/15-9/10
334-50	9/4-9/15
334-60	9/14-9/19

4/Season closes 8/1 in 334-41

Table 6. Yukon Area Commercial Fisheries Entry Commission permits issued by residence, 1982.

District	Residence	Gillnet Permits 1/	Fishwheel Permits 1/
1, 2 and 3	Emmonak	98	
	Mountain Village	92	
	Alakanuk	85	
	Kotlik	74	
	St. Marys	59	
	Pilot Station	47	
	Marshall	45	
	Scammon Bay	39	
	Sheldons Point	30	
	Russian Mission	18	
	Holy Cross	14	
	Unalakleet	14	
	Anchorage	14	
	Bethel	9	
	Stebbins	8	
	Pitkas Point	4	
	Fairbanks	3	
	Shaktoolik	2	
	Eagle River	2	
	Hamilton	1	
	Chuloonawik	1	
	Hooper Bay	1	
	Galena	1	
	Manley Hot Springs	1	
	Delta Junction	1	
	Paxson	1	
	Elim	1	
	Big Lake	1	
	Sitka	1	
	Palmer	1	
	Wasilla	1	
	Tuntutliak	1	
	Nome	1	
	Aniak	1	
	Kodiak	1	
	Tacoma, WA	1	
	Redmond, WA	1	
	Everett, WA	1	
TOTAL LOWER YUKON		676	
4	Anvik	5	7
	Grayling	1	11
	Kaltag	3	11
	Nulato	0	17
	Koyukuk	0	3
	Galena	7	24
	Ruby	2	9
	Nenana	1	1
	Fairbanks	1	1
	Anchorage	1	1
	Wasilla	1	0
Subtotal		22	85
5	Tanana	10	17
	Rampart	4	5
	Stevens Village	1	2
	Circle	2	0
	Ft. Yukon	0	1
	Eagle	2	0
	Anchorage	1	1
	Fairbanks	14	14
	Nenana	1	2
	Tok	0	1
	Manley	1	1
	Chugiak	1	0
	College	0	1
Subtotal		37	45
6	Manley	2	1
	Nenana	6	21
	Fairbanks	3	10
	College	0	1
Subtotal		11	33
TOTAL UPPER YUKON AREA		70	163
GRAND TOTAL YUKON AREA		746	163

1/ Does not include transfers

Table 7. Commercial salmon catches, drift and set gill nets combined, district 334-10, Yukon area, 1982.

Period Dates	Hours Fished	No. of Fishermen	Period Catch and Catch Per Unit Effort						Cumulative Catch and Catch Per Unit Effort					
			King	CPUE	Coho	CPUE	Chum	CPUE	King	CPUE	Coho	CPUE	Chum	CPUE
6/14-6/15	24	339	5,643	0.69	0	0.00	14,523	1.79	5,643	0.69	0	0.00	14,523	1.79
6/17-6/18	24	391	12,395	1.32	0	0.00	19,705	2.10	18,038	1.03	0	0.00	34,228	1.95
6/21-6/22	24	394	19,925	2.11	0	0.00	32,868	3.48	37,963	1.41	0	0.00	67,096	2.49
6/24-6/25	24	386	7,103	0.77	0	0.00	19,320	2.09	45,066	1.24	0	0.00	86,416	2.38
6/28-6/29	24	402	18,173	1.88	0	0.00	39,870	4.13	63,239	1.38	0	0.00	126,286	2.75
7/01-7/02	24	397	7,504	0.79	0	0.00	29,702	3.12	70,743	1.28	0	0.00	155,988	2.81
Subtotal a.)	144	450	70,743	1.09	0	0.00	155,988	2.41						
7/05-7/06	24	287	1,920	0.28	0	0.00	33,800	4.91	1,920	0.28	0	0.00	189,788	3.05
7/08-7/10	36	331	1,237	0.10	0	0.00	48,346	4.06	3,157	0.17	0	0.00	238,134	3.21
7/12-7/13	24	291	287	0.04	1	0.00	10,816	1.55	3,444	0.13	1	0.00	248,950	3.07
7/15-7/17	36	173	85	0.01	0	0.00	6,641	1.07	3,529	0.11	1	0.00	255,591	2.92
Subtotal b.)	264		3,529	0.11	1	0.00	249,378	2.92						
7/19-7/20	24	200	58	0.01	0	0.00	4,310	0.90	3,587	0.10	1	0.00	10,523	1.14
7/22-7/23	24	280	49	0.01	4	0.00	27,751	4.13	3,636	0.08	5	0.00	38,274	2.40
7/26-7/27	24	171	14	0.00	17	0.00	4,041	0.98	3,650	0.08	22	0.00	42,315	2.11
7/29-7/30	24	219	15	0.00	169	0.03	11,711	2.23	3,665	0.07	191	0.00	54,026	2.13
8/02-8/03	24	204	14	0.00	242	0.05	7,893	1.61	3,679	0.06	433	0.00	61,919	2.05
8/05-8/06	24	127	15	0.00	341	0.11	1,200	0.39	3,694	0.06	774	0.01	63,119	1.90
8/09-8/10	24	230	8	0.00	2,043	0.37	13,716	2.48	3,702	0.06	2,817	0.02	76,835	1.98
8/12-8/13	24	275	6	0.00	12,298	1.86	20,649	3.13	3,708	0.05	15,115	0.12	97,484	2.15
Subtotal c.)	192	401	3,708	0.05	15,114	0.12	97,484	2.15						
Season Total	456	455	74,451		15,115		346,862							

a.) King salmon season (6/14-7/02), unrestricted mesh size.
b.) Summer chum salmon season (6/14-7/15). Note, 6,213 chums caught in the 10th period after July 15 are counted on the fall chum harvest, and are not included in this chum subtotal.
c.) Fall chum salmon season (7/16-8/13). Subtotal for chums represents fall chums counted against the guideline harvest range. Subtotals for king and coho represents the catch after the 6" mesh size restriction.

Table 8. Commercial salmon catches, drift and set gill nets combined, district 334-20, Yukon area, 1982.

Period Dates	Hours Fished	No. of Fishermen	Total Catch and Catch Per Unit Effort						Cumulative Catch and Catch Per Unit Effort					
			King	CPUE	Coho	CPUE	Chum	CPUE	King	CPUE	Coho	CPUE	Chum	CPUE
6/16-6/17	24	167	3,972	0.99	0	0.00	9,956	2.48	3,972	0.99	0	0.00	9,956	2.48
6/20-6/21	24	188	7,779	1.72	0	0.00	11,231	2.49	11,751	1.38	0	0.00	21,187	2.49
6/23-6/24	24	195	11,861	2.53	0	0.00	20,121	4.30	23,612	1.79	0	0.00	41,308	3.13
6/27-6/28	24	169	3,442	0.85	0	0.00	7,575	1.87	27,054	1.57	0	0.00	48,883	2.83
6/30-7/01	24	198	8,602	1.81	0	0.00	20,235	4.26	35,656	1.62	0	0.00	69,118	3.14
Subtotal a.)	120	224	35,656	1.62	0	0.00	69,118	3.14						
7/04-7/05	24	149	1,661	0.46	0	0.00	52,362	14.64	1,661	0.46	0	0.00	121,480	4.75
7/07-7/09	36	153	1,065	0.19	0	0.00	31,613	5.74	2,726	0.30	0	0.00	153,093	4.92
7/11-7/12	24	131	391	0.12	0	0.00	19,515	6.21	3,117	0.25	0	0.00	172,608	5.04
7/14-7/16	36	107	215	0.06	0	0.00	8,611	2.24	3,332	0.21	0	0.00	181,219	4.76
7/18-7/19	24	48	26	0.02	0	0.00	5,859	5.09	3,358	0.19	0	0.00	187,078	4.77
Subtotal b.)	144264		3,358	0.19	0	0.00	182,358	4.77						
7/21-7/22	24	80	46	0.02	0	0.00	4,397	2.29	3,404	0.18	0	0.00	9,117	3.53
7/25-7/26	24	143	34	0.01	16	0.00	17,117	4.99	3,438	0.15	16	0.00	26,234	4.36
7/28-7/29	24	118	18	0.01	17	0.01	6,817	2.41	3,456	0.14	33	0.00	33,051	3.73
8/01-8/02	24	132	5	0.00	90	0.03	16,066	5.07	3,461	0.12	123	0.00	49,117	4.09
8/04-8/05	24	109	3	0.00	139	0.05	9,172	3.51	3,464	0.11	262	0.00	58,289	3.98
8/08-8/09	24	65	4	0.00	224	0.14	967	0.62	3,468	0.11	486	0.01	59,256	3.66
8/11-8/12	24	124	3	0.00	934	0.31	5,672	1.91	3,471	0.10	1,420	0.02	64,928	3.39
8/15-8/16	24	171	5	0.00	12,759	3.11	31,653	7.71	3,476	0.09	14,179	0.23	96,581	4.15
Subtotal c.)	192	195	3,476	0.09	14,179	0.23	96,581	4.15						
Season Total	456	244	39,132		14,179		278,939							

a.) King salmon season (6/16-7/01), unrestricted mesh size.
b.) Summer chum salmon season (6/16-7/18). Note, 4,720 chums caught in the 10th period after July 18 are counted on the fall chum harvest, and are not included in this chum subtotal.
c.) Fall chum salmon season (7/19-8/16). Subtotal for chums represents fall chums counted against the guideline harvest range. Subtotals for king and coho represents the catch after the 6" mesh size restriction.

Table 9. Commercial salmon catches, drift and set gill nets combined, district 334-30, Yukon area, 1982.

Period Dates	Hours Fished	No. of Fishermen	Total Catch and Catch Per Unit Effort						Cumulative Catch and Catch Per Unit Effort					
			King	CPUE	Coho	CPUE	Chum	CPUE	King	CPUE	Coho	CPUE	Chum	CPUE
6/28-6/29	24	21	1,107	2.20	0	0.00	1,063	2.11	1,107	2.20	0	0.00	1,063	2.11
7/01-7/02	24	21	572	1.13	0	0.00	1,850	3.67	1,679	1.67	0	0.00	2,913	2.89
7/05-7/06	24	19	929	2.04	0	0.00	1,173	2.57	2,608	1.78	0	0.00	4,086	2.79
Subtotal a.)	72	21	2,608	1.78	0	0.00	4,086	2.79						
7/26-7/28	36	3	0	0.00	0	0.00	216	2.00	0	0.00	0	0.00	216	2.00
7/29-7/31	36	10	1	0.00	0	0.00	1,344	3.73	1	0.00	0	0.00	1,560	3.33
8/02-8/04	36	11	0	0.00	0	0.00	850	2.15	1	0.00	0	0.00	2,410	2.79
8/05-8/07	36	10	0	0.00	0	0.00	1,547	4.30	1	0.00	0	0.00	3,957	3.23
8/09-8/11	36	5	0	0.00	0	0.00	781	4.34	1	0.00	0	0.00	4,738	3.37
8/12-8/14	36	1	0	0.00	0	0.00	25	0.69	1	0.00	0	0.00	4,763	3.31
8/16-8/18	36	11	0	0.00	87	0.22	1,052	2.66	1	0.00	87	0.03	5,815	3.17
Subtotal b.)	252	15	0	0.00	87	0.03	5,815	3.17						
Season Total	324	22	2,609		87		9,901							

a.) King salmon season (6/28-7/06), unrestricted mesh size.
b.) Fall chum salmon season (7/26-8/18). 6" mesh size restriction in effect, all chums counted against the fall chum guideline harvest range.

Table 10. Commercial salmon catches, district 334-40, Yukon area, set gillnet and fishwheel catches combined, 1982.

Period	Fishermen	King	Chum	Coho
6/20-6/22	2		212	
6/23-6/25	10	13	1,728	
6/27-6/29	17	31	3,175	
6/30-7/2	37	37	14,597	
7/4-7/6	51	118	25,979	
7/7-7/9	58	204	25,256	
7/11-7/13	63	274	38,244	
7/14-7/16	61	264	25,415	
7/18-7/20	54	117	11,118	
7/21-7/23	40	41	5,031	
7/25-7/27	24	8	1,744	
7/28-7/30	15		811	
8/1-8/3	7		452	
8/4-8/6	1		35	
8/8-8/10	7		679	
8/11-8/13	8		452	
Subtotal King Salmon Season[1]	74	1,107	154,928	0
8/15-8/17	7		580	
8/18-8/20	9		674	1
8/22-8/24	2		122	5
8/26-8/28	2		196	9
8/29-8/31	4		560	
9/1-9/3	5		1,031	
9/5-9/7	3		759	
9/8-9/10	2		139	
Subtotal Fall Season[2]	15	0	4,061	15
Total	76	1,107	158,989	15

1 King season 6/20-8/13
2 Fall season 8/15-9/10

Table 11. Commercial salmon catches, district 334-50, Yukon area, set gillnet and fishwheel catches combined, 1982.

Period	Fishermen	King	Chum	Coho
6/25-6/27	7	70		
6/29-7/1	20	345		
7/2-7/4	26	468		
7/6-7/8	30	813		
7/9-7/11	38	1,703	50	
7/13-7/14[a]	34	1,285	184	
7/15-7/17	2	100		
7/18-7/24	2	211		
7/25-7/31	2	278		
8/1[b]	2	106		
Subtotal King Salmon Season	46	5,379	234	0
9/4-9/5	4		2,034	
9/7-9/9	5		3,935	
9/10-9/12	21		6,543	
9/14-9/15	8		1,166	
Subtotal Fall Season[c]	24	0	13,678	0
Total	55	5,379	13,912	0

[a] King salmon season closed in subdistricts 334-51, 334-52, and 334-53 on 7/14.
[b] King salmon season closed in subdistrict 334-54 on 8/1.
[c] Fall season subdistrict 334-51, 9/4-9/14; subdistricts 334-52 and 334-53, 9/11-9/15.

Table 12. Commercial salmon catches, district 334-60, Yukon area, set gillnet and fishwheel catches combined, 1982.

Period	Fishermen	King	Chum	Coho
7/2-7/4	1	4		
7/5-7/7	3	12		
7/9-7/11	4	41	3	
7/12-7/14	6	83	91	
7/16-7/18	9	160	990	
7/19-7/21	11	347	1,227	
7/23-7/25	12	202	2,315	
7/26-7/28	14	96	4,179	
7/30-8/1	17	20	5,438	
8/2-8/4	17	11	5,671	
8/6-8/8	18	5	3,268	
Subtotal King Salmon Season[1]	20	981	23,182	0
9/14-9/15	21		2,593	2,645
9/17-9/19	25		4,823	5,135
Subtotal Fall Season[2]	25	0	7,416	7,780
Total	27	981	30,598	7,780

1 King salmon season 7/2-8/8.
2 Fall season 9/14-9/19.

Table 13. Upper Yukon area salmon and salmon roe production, 1982.

Statistical area		No. of fishermen	Kings	Summer chums			Fall chums			Coho
				Chums	Chum roe [1/]	Equiv. [2/] chums	Chums	Chum roe [1/]	Equiv. [3/] chums	
	334-41	56	78	1,032	137,611	138,643	--	--	--	--
	42	17	509	1,059	12,550	13,609	958	20	978	--
	43	14	520	1,556	1,120	2,676	2,936	147	3,083	15
Subtotal	334-40	76	1,107	3,647	151,281	154,928	3,894	167	4,061	15
	334-51	7	61		21	21	8,286	--	8,286	--
	52	22	2,339	213	--	213	1,060	23	1,083	--
	53	26	2,284	--	--	--	4,290	19	4,309	--
	54	2	695	--	--	--	--	--	--	--
Subtotal	334-50	53	5,379	213	21	234	13,636	42	13,678	--
	334-61	4	414	4,982	--	--	706	--	706	1,004
	62	17	309	12,471	1,027	13,498	4,586	596	5,182	6,449
	63	6	258	4,212	490	4,702	1,528	--	1,528	327
Subtotal	334-60	27	981	21,665	1,517	23,182	6,820	596	7,416	7,780
Total		156	7,467	25,525	152,819	178,344	24,350	805	25,155	7,795

1 All figures in pounds of unprocessed product.
2 Includes some king salmon roe.
3 Includes some coho salmon roe.

Table 14. Yukon River subsistence salmon catch data, 1982. a/

Village	Survey date	Fishing families	Dogs b/	Snow machines b/	Kings	Summer chums c/	Fall chums	Cohos	Subtotal chums & cohos	Total salmon	Whitefish/ sheefish	8" nets	6" nets	Fishwheels
Sheldons Pt.	8/27	16	39	29	79	885	886	1,770	3,541	3,620	500/150	5	30	0
Alakanuk	8/28	70	139	116	336	5,225	1,336	1,313	7,874	8,210	1,375/498	56	105	0
Emmonak	9/4	77	158	95	1,328	8,426	4,458	4,795	17,679	19,007	2,780/1,160	57	89	0
Kotlik	8/31	42	117	56	568	3,916	3,336	3,314	10,566	11,134	1,449/918	28	50	0
Subtotal		205	453	296	2,311	18,452	10,016	11,192	39,660	41,971	6,104/2,726	146	274	0
Mt. Village	9/7	63	129	60	218	3,854	2,810	3,025	9,689	9,907	391/379	46	75	0
Pitkas Pt.	9/7	13	25	10	373	1,418	901	826	3,145	3,518	85/199	9	12	0
St. Marys	9/7	50	140	49	612	7,987	1,485	1,957	11,429	12,041	484/491	35	56	0
Pilot Station	9/9	39	76	41	428	2,135	1,568	2,644	6,347	6,775	2,929/719	22	38	0
Marshall	9/10	40	170	47	478	3,048	2,747	1,777	7,572	8,050	946/678	29	43	0
Subtotal		205	540	207	2,109	18,442	9,511	10,229	38,182	40,291	4,835/2,466	141	224	0
Russian Mission	9/11	21	88	41	1,628	1,419	630	156	2,205	3,833	224/315	19	19	0
Holy Cross	9/12	21	112	20	1,731	4,421	1,029	519	5,969	7,700	418/103	25	25	0
Subtotal		42	200	61	3,359	5,840	1,659	675	8,174	11,533	642/418	44	44	0
Lower Yukon Totals		452	1,193	564	7,779	42,734	21,186	22,096	86,016	93,795	11,581/5,610	331	542	0
Anvik	9/13	20	134	20	354	27,087	4,088	58	31,233	31,587	912/56	3	9	7
Grayling	9/13	26	222	26	294	47,006	2,972	1,014	50,992	51,286	2,374/723	7	17	17
Kaltag	10/1	23	128	23	344	37,125	812	62	37,999	38,343	2,687/101	4	9	11
Nulato	10/1	18	105	19	811	19,740	217	76	20,033	20,844	1,020/84	7	10	12
Koyukuk	10/1	11	123	11	493	18,149	1,355	187	19,691	20,184	1,788/55	2	4	5
Galena	10/2	21	126	18	735	20,434	2,164	347	22,945	23,680	9,969/65	8	9	12
Ruby	10/2	17	306	20	1,168	7,539	6,662	867	15,068	16,236	4,774/228	1	15	12
Subtotal		136	1,114	137	4,199	177,080	18,270	2,611	197,961	202,160	23,524/1,312	32	73	76
Tanana	10/23	25	382	25	2,230	3,214	31,470	3,260	37,944	40,174	21,293/1,952	24	21	19
Rampart	10/23	7	189	4	887	0	5,495	0	5,495	6,382	1,517/265	5	1	6
Fbks. Fishcamp	d/ e/	44 f/			1,935	2,056	9,272	20	11,348	13,283	3,824/1,047	N.A.	N.A.	9
Stevens Village	10/30	17	79	7	1,810	666	7,392	23	8,081	9,891	2,644/73	11	3	9
Beaver	10/30	5	28	0	250	534	1,878	0	2,412	2,662	69/4	4	1	1
Ft. Yukon	10/30	25	145	19	1,894	1,434	1,926	125	3,485	5,379	2,394/45	16	5	10
Circle	11/7	9	52	7	969	0	290	0	290	1,259	6/16	1	0	3
Eagle	11/7	52	220	42	2,864	1,887	13,255	0	15,142	18,006	233/32	24	30	7
Subtotal		184	1,095	104	12,839	9,791	70,978	3,428	84,197	97,036	31,980/3,434	85	61	64
Main River Totals		772	3,402	805	24,817	229,605	110,434	28,135	368,174	392,991	67,085/10,386	448	676	140

Table 14. Yukon River subsistence salmon catch data, 1982.[a] (continued)

Village	Survey date	Fishing families	dogs[b]	Snow machines[b]	Kings	Summer chums[c]	Fall chums	Cohos	Subtotal chums & cohos	Total salmon	Whitefish/ sheefish	8" nets	6" nets	Fishwheels
Huslia	9/30	14	106	20	125	6,809	102	17	6,928	7,053	1,521/75	2	14	0
Hughes	9/30	13	114	10	479	8,409	1,231	0	9,640	10,119	747/332	5	21	0
Alatna	9/30	1	12	2	6	410	8	20	438	444	150/95	0	2	0
Allakaket	9/30	18	157	26	268	7,277	708	304	8,289	8,557	1,462/444	1	30	0
Koyukuk River Totals		46	389	58	878	22,905	2,049	341	25,295	26,173	3,880/946	8	67	0
Venetie	10/30	4	23	5	20	0	850	0	850	870	0/0	2	3	0
Chandalar River Totals		4	23	5	20	0	850	0	850	870	0/0	2	3	0
Manley	11/13	10	223	13	386	971	4,444	837	6,252	6,638	511/14	6	4	3
Minto		4	28	1	411	808	3,568	1,500	5,876	6,287	217/0	0	0	3
Nenana	11/14	26	290	12	1,195	3,972	9,034	3,078	16,084	17,279	304/143	14	13	19
Fairbanks	[g]	209[h]	N.A.	N.A.	451	2,708	2,518	2,003	7,229	7,680	N.A.	N.A.	N.A.	8
Tanana River Totals		249	541	26	2,443	8,459	19,564	7,418	35,441	37,884	1,032/157	20	17	33
Subtotals														
Upper Yukon (Alaska)		619	3,162	330	20,379	218,235	111,711	13,798	343,744	364,123	60,416/5,849	147	221	173
Totals Yukon River Drainage (Alaska)		1,071	4,355	894	28,158	260,969	132,897	35,894	429,760	457,918	71,997/11,459	478	763	173
Yukon Territory[i]														
Dawson[j]					8,227		3,459		3,459	11,686				
Grand Total Yukon River Drainage		1,071	4,335	894	36,385	260,969	136,356	35,894	433,219	469,604	71,997/11,459	478	763	173

a Catch data expanded.
b Data from fishing families only.
c Includes small numbers of pinks upstream to Kaltag.
d Data from fishermen who fished between Hess Creek and Dall River.
e Survey conducted by mail, November-January.
f 60 permits issued.
g Data from fishermen who fished on the Tanana River between Wood River and Salcha River.
h 330 permits issued.
i Data from Environment Canada Fisheries Service (Whitehorse).
j Includes catches from Mayo, Pelly, Carmacks, Dawson, Ross River, Teslin, Burwash Landing, Steward River, Pelly River, and Lake Laberge.

Table 15. Aerial survey salmon escapement estimates, Yukon river drainage, 1982. a/

Stream (drainage)	Date	Survey rating	Kings	Cohos	Summer chums	Fall chums	Pinks
Andreafsky River							
West fork	7/20 & 8/6	fair	851	-	7,267	-	many
East fork	7/20	fair	1,274	-	(7,501)	-	many
East Fork sonar count[b,c]	6/25-7/20		-	-	180,078	-	-
			2,125	-	187,345	-	many
Anvik River Drainage							
Sonar count[b,d]			-	-	444,581	-	-
Koyukuk River Drainage							
Gisasa River	8/5	good	421	-	334	-	-
Dakli River							
Wheeler Creek	8/6	good	1	-	1,197	-	-
Hogatza River							
Clear Creek	8/6	good	-	-	4,198	-	-
Caribou Creek	8/6	good	-	-	786	-	-
Subtotal			-	-	4,984	-	-
Indian River	8/6	fair	4	-	300	-	-
Henshaw Creek	8/4	fair	48	-	12	-	-
South Fork Koyukuk	8/4	poor	7	-	-	-	-
Jim River	8/3	poor	15	-	1	-	-
Subtotal			22	-	1	-	-
North Fork Koyukuk	8/4	poor	1	-		-	-
Total Koyukuk River Drainage			497	-	6,828	-	-
Melozitna River Drainage							
Sonar count[b]	6/26-7/23		82	-	22,628	-	-
Tozitna River	8/5	fair	51	-	874	-	-
Tanana River Drainage							
Kantishna River Drainage							
Toklat River							
Sushana River[e]	10/21	good	-	-	-	2,354	-
Geiger Creek[e]	10/21	good	-	-	-	807	-
Unnamed Slough[e]	10/21	good	-	-	-	148	-
Subtotal			-	-	-	3,309	-
Bearpaw River	8/12	poor	4	-	-	-	-
Moose Creek	8/12	poor	9	-	-	-	-
Subtotal			13	-	-	-	-
Nenana River Drainage							
Wood Creek [f]	9/19-10/15			1,436[f]	-	38[f]	-
Chatanika River	8/12	fair-good	159	-	265	-	-
Chena River	7/28 & 8/12	fair-good	2,073	-	1,509	-	-
Salcha River	7/28 & 8/12	fair	2,534	-	3,756	-	-

(continued)

Table 15. (Continued)

Stream (drainage)	Date	Survey rating	Kings	Cohos	Summer chums	Fall chums	Pinks
Upper Tanana River Drainage							
Delta River[e]	10/27	good	-	-	-	3,433	-
Bluff Cabin Slough[e]	10/28	good	-	-	-	1,156	
Delta Clearwater R.[g,h,i]	11/3	poor	-	8,365	-	-	-
Subtotal			-	8,365	-	4,589	-
Total Tanana River Drainage			4,779	9,801	5,530	7,936	-
Chandalar River	10/6	fair	-	-	-	1,145	-
Porcupine River Drainage							
Sheenjek River	9/14	poor	-	-	-	(717)	-
Sonar Count[b]	8/31-9/22		-	-	-	29,093	-
Fishing Branch River[j]	10/12	good	-	-	-	5,846	-
Total Porcupine River			-	-	-	34,939	-
Yukon Territory Streams							
Klondike River[j]	8/9		40	-	-	-	-
North McQuesten River[j]	8/9		39	-	-	-	-
Tatchun Creek[d,j]	8/27		73	-	-	-	-
Little Salmon River	8/15	fair	403	-	-	-	-
Big Salmon R. Drainage	8/15	fair	1,168	-	-	-	-
Nisutlin River	8/14	good	837	-	-	-	-
McNeil River	8/14	good	6	-	-	-	-
Wolf River	8/14	fair	225	-	-	-	-
Morley River	8/16	fair	176	-	-	-	-
Swift River	8/16	fair	31	-	-	-	-
Jennings River	8/16	fair	40	-	-	-	-
Gladys River	8/16	fair-good	25	-	-	-	-
Riddell River	8/19	poor	3	-	-	-	-
Hoole River	8/17	poor	16	-	-	-	-
Ross River	8/19	fair	116	-	-	-	-
Lewis Lake Outlet	8/19	poor	39	-	-	-	-
Kluane River Drainage[k]	10/14		-	-	-	5,378	-
Mainstem Yukon[m]	10/5-23		20	-	-	1,020	-
Whitehorse Dam[j]	8/1-9/2		473	-	-	-	-
Michie Creek	8/22		(150)	-	-	-	-
Takhini River[j]	9/1		14	-	-	-	-
Teslin River[j]	9/2-8		51	-	-	-	-
Subtotal			3,795	-	-	6,398	-
YUKON RIVER DRAINAGE TOTALS			11,329	9,801	667,786	50,418	-

[a] Only peak estimates listed, carcasses included (data in parentheses not included in subtotals).
[b] Side-scan sonar estimates.
[c] Sonar count (181,352) was reduced by aerial king salmon count (1,274) on 7/20. Final estimate of summer chums (180,078) probably includes some pink salmon.
[d] Sonar count includes king salmon.
[e] Foot survey.
[f] FRED weir count. All chums and 120 coho artificially spawned for Clear hatchery use.
[g] Surveyed by Sport Fish Division.
[h] Boat survey.
[i] Population estimate.
[j] Survey by Environment Canada Fisheries Service (Yukon Territory).
[k] Surveyed by Foothills Pipeline Ltd. - Gas Pipeline Studies. Preliminary data.
[m] Mainstem Yukon River from Yukon Crossing to Fort Selkirk.

Appendix Table 1. Yukon River drainage commercial and subsistence salmon catches, 1903-1982.

	Commercial Catch										
	Alaska				Yukon Territory			Total			
Year	King	Coho	Chum	Total	King	Chum	Total	King	Coho	Chum	Total
1903							4,666 8/				4,666
1904											
1905											
1906											
1907											
1908							7,000				7,000
1909							9,238				9,238
1910											
1911											
1912											
1913							12,133				12,133
1914							12,573				12,573
1915							10,466				10,466
1916							9,566				9,566
1917											
1918	12,239	26,144	73,921	112,304			7,066	12,239	26,144	73,921	119,370
1919	104,822	37,070	327,898	469,790			1,800	104,822	37,070	327,898	471,590
1920	58,467		155,655	214,122			12,000	58,467		155,655	226,122
1921	69,646	1,000	111,098	181,744			10,840	69,646	1,000	111,098	192,584
1922	16,825			16,825			2,420	16,825			19,245
1923	13,393			13,393			1,833	13,393			15,226
1924	27,375			27,375			4,560	27,375			31,935
1925							3,900				3,900
1926							4,373				4,373
1927							5,366				5,366
1928							5,733				5,733
1929							5,266				5,266
1930							3,660				3,660
1931							3,473				3,473
1932	4,739			4,739			4,200	4,739			8,939
1933	8,829			8,829			3,333	8,829			12,162
1934	25,365			25,365			2,000	25,365			27,365
1935	7,265			7,265			3,466	7,265			10,731
1936	20,963			20,963			3,400	20,963			24,363
1937	6,226			6,226			3,746	6,226			9,972
1938	13,727			13,727			860	13,727			14,587
1939	9,987			9,987			720	9,987			10,707
1940	18,053			18,053			1,153	18,053			19,206
1941	29,905			29,905			2,806	29,905			32,711
1942	22,487			22,487			713	22,487			23,200
1943	27,650			27,650			609	27,650			28,259
1944	14,232			14,232			986	14,232			15,218
1945	19,727			19,727			1,333	19,727			21,060
1946	22,782			22,782			353	22,782			23,135
1947	54,026			54,026			120	54,026			54,146
1948	33,842			33,842				33,842			33,842
1949	36,379			36,379				36,379			36,379
1950	41,808			41,808				41,808			41,808
1951	3/ 56,278			56,278				56,278			56,278
1952	38,637	10,868		49,505				38,367	10,868		49,505
1953	58,859		5,977	64,836				58,859		5,977	64,836
1954	64,545		14,375	4/ 78,290				64,545		14,375	78,920
1955	55,925			55,925				55,925			55,925
1956	62,208	1	10,742	5/ 72,951				62,208	1	10,742	72,951
1957	63,623			63,623				63,623			63,623
1958	63,375			63,375	3,000	1,500	4,500/7	66,735		1,500	68,235
1959	78,370			78,370	2,477	1,098	3,575	80,847		1,098	81,945
1960	6/ 67,597			67,597	4,085	5,493	9,578	71,682		5,493	77,175
1961	120,260	2,855	42,577	5/ 165,692	3,446	3,278	6,724	123,706	2,855	45,885	172,416
1962	94,734	22,926	53,106	5/ 170,820	4,037	936	4,973	98,771	22,926	54,096	175,793
1963	116,994	5,572	5/	122,566	2,283	2,192	4,475	119,277	5,572	2,192	127,041
1964	93,587	2,446	8,347	104,380	3,208	1,929	5,137	96,795	2,446	10,276	109,517
1965	118,098	350	23,317	141,765	2,265	2,071	4,336	120,363	350	25,388	146,101
1966	93,315	19,254	71,045	5/ 183,614	1,942	3,157	5,099	92,257	19,254	74,202	188,713
1967	129,706	11,047	49,453	5/ 190,205	2,187	3,343	5,530	131,893	11,047	52,796	195,736
1968	106,526	13,303	67,397	5/ 187,224	2,212	435	2,647	108,732	13,303	67,830	189,871
1969	90,223	14,981	191,860	297,064	1,640	2,279	3,919	91,863	14,981	194,139	300,983
1970	80,269	12,245	356,724	5/ 439,238	2,611	2,479	5,090	82,880	12,245	349,203	444,328
1971	110,507	12,203	289,684	5/ 412,394	3,178	1,761	4,939	113,685	12,203	291,445	417,333
1972	92,840	22,233	287,844	402,917	1,769	2,532	4,301	94,609	22,233	299,376	407,218
1973	75,353	36,641	518,035	4/ 640,029	1,871	2,228	4,099	77,224	36,641	520,263	634,128
1974	97,919	16,240	879,243	993,402	2,214	3,010	5,224	100,133	16,240	882,253	998,626
1975	63,740	2,346	984,859	1,050,945	3,000	2,500	5,500	66,740	2,346	987,359	1,056,445
1976	88,671	5,197	761,509	855,377	3,500	1,000	4,500	92,171	5,197	762,509	859,877
1977	96,414	37,705	797,697	931,816	4,620	3,990	8,610	101,034	37,705	801,687	940,426
1978	97,602	25,960	1,288,829	1,412,391	2,975	3,356	6,331	100,577	25,960	1,292,185	1,418,722
1979	129,056	17,110	1,165,980	1,312,146	6,175	9,084	15,259	135,231	17,110	1,175,064	1,327,405
1980	155,088	8,741	1,355,884	1,519,713	9,500	9,000	18,500	164,588	8,741	1,364,884	1,538,213
1981	157,607	23,702	1,677,871	1,859,180	8,593	15,260	23,853	166,200	23,701	1,693,131	1,883,033
1982	123,569	37,176	839,201	1,000,036	8,640	11,158	19,798	132,299	37,176	850,359	1,019,834

Appendix Table 1. (Continued)

Year	Subsistence Catch								
	Alaska			Yukon Territory			Total		
	King	Other Salmon 2/	Total	King	Other Salmon 2/	Total	King	Other Salmon 2/	Total
1903									
1904									
1905									
1906									
1907									
1908									
1909									
1910									
1911									
1912									
1913									
1914									
1915									
1916									
1917									
1918		1,400,000	1,400,000					1,400,000	1,400,000
1919		269,000	269,000					269,000	269,000
1920	20,000	860,000	880,000				20,000	860,000	880,000
1921									
1922	15,000	330,000	345,000				15,000	330,000	345,000
1923	17,500	435,000	452,500				17,500	435,000	452,500
1924		1,130,000	1,130,000					1,130,000	1,130,000
1925	15,000	259,000	274,000				15,000	259,000	274,000
1926	20,500	555,000	575,500				20,500	555,000	575,500
1927		520,000	520,000					520,000	520,000
1928		670,000	670,000					670,000	670,000
1929		537,000	537,000					537,000	537,000
1930		633,000	633,000					633,000	633,000
1931	26,693	565,000	591,693				26,693	565,000	591,693
1932	23,160	1,092,000	1,115,160				23,160	1,092,000	1,115,160
1933	19,950	603,000	622,950				19,950	603,000	622,950
1934		474,000	474,000					474,000	474,000
1935	20,400	537,000	557,400				20,400	537,000	557,400
1936	22,750	560,000	582,750				22,750	560,000	582,750
1937	5,528	346,000	351,528				5,528	346,000	351,528
1938	19,244	340,450	359,694				19,244	340,450	359,694
1939	18,050	327,650	345,700				18,050	327,650	345,700
1940	14,400	1,029,999	1,043,400				14,400	1,029,000	1,043,400
1941	17,703	438,000	455,703				17,703	438,000	455,703
1942		197,000	197,000					197,000	197,000
1943		200,000	200,000					200,000	200,000
1944									
1945									
1946									
1947									
1948									
1949									
1950									
1951									
1952									
1953		380,000	380,000					380,000	380,000
1954									
1955									
1956									
1957									
1958	11,890	337,500	349,390	8,000		8,000	19,890	337,500	357,390
1959				5,957	2,000 7/	7,957	7,957	2,000	7,957
1960				6,965	8,429	15,394	6,965	8,429	15,394
1961	21,488	407,089	428,577	10,376	5,800	16,176	31,864	412,889	444,753
1962	11,110	349,141	360,251	10,500	9,300	19,800	21,610	358,441	380,051
1963	24,862	396,125	420,987	8,108	25,500	33,608	32,970	421,625	454,595
1964	16,231	481,440	497,671	6,646	4,181	10,827	22,877	485,621	508,498
1965	16,608	449,131	465,739	3,115	9,800	12,915	19,723	458,931	478,654
1966	11,572	206,011	217,583	2,700	8,600	11,300	14,272	214,611	228,883
1967	16,448	274,977	291,425	3,213	13,600	16,813	19,661	288,577	308,238
1968	12,106	178,507	198,613	2,900	11,100	14,000	15,006	189,607	204,613
1969	14,000	208,254	222,254	1,000	5,500	6,500	15,000	213,754	228,754
1970	13,874	222,005	235,879	2,100	1,200	3,300	15,974	223,205	239,179
1971	25,684	228,649	254,333	2,800	14,000	16,800	28,044	228,749	256,793
1972	20,258	144,008	164,266	1,674	8,000	9,647	21,868	151,008	172,876
1973	24,317	214,682	238,999	2,116	6,938	9,054	26,433	221,620	248,053
1974	19,964	321,587	341,551	3,379	8,636	12,015	23,343	330,223	353,566
1975	13,045	298,479	311,524	3,000	18,100	21,100	15,645	311,979	327,624
1976	17,806	259,199	277,005	1,523	3,425	4,948	19,329	262,624	281,953
1977	17,581	258,606	276,147	2,807	8,521	11,328	20,388	267,127	287,515
1978	27,391	293,581	320,972	2,906	6,210	9,116	30,297	299,791	330,088
1979	31,005	439,328	470,333	4,200	13,000	17,200	35,205	452,328	487,533
1980	42,724	465,213	507,937	15,500	14,500	30,000	58,224	479,713	537,937
1981	29,690	418,037	447,727	8,844	7,329	16,173	38,534	425,366	463,900
1982	28,158	429,760	457,918	8,227	3,459	11,686	36,385	433,219	469,604

Appendix Table 1. (Continued)

Year	Total Utilization								
	Alaska			Yukon Territory			Total		
	King	Other Salmon 2/	Total	King	Other Salmon 2/	Total	King	Other Salmon 2/	Total
1903						4,666			4,666
1904									
1905									
1906									
1907									
1908						7,000			7,000
1909						9,238			9,238
1910									
1911									
1912									
1913						12,133			12,133
1914						12,573			12,573
1915						10,466			10,466
1916						9,566			9,566
1917									
1918	12,239	1,500,065	1,512,304			7,066	12,239	1,500,065	1,519,370
1919	104,822	738,790				1,800	104,822	740,590	845,412
1920	78,467	1,015,655	1,843,612			12,000	78,467	1,015,655	1,106,122
1921	69,646	112,098	181,244			12,840	69,646	112,098	192,584
1922	31,825	330,000	361,825			2,420	31,825	330,000	364,245
1923	30,893	435,000	465,893			1,833	30,893	435,000	467,726
1924	27,375	1,130,000	1,157,375			4,560	27,375	1,130,000	1,161,935
1925	15,000	259,000	274,000			3,900	15,000	259,000	277,900
1926	20,500	555,000	575,500			4,373	20,500	555,000	579,873
1927		520,000	520,000			5,366		520,000	525,366
1928		670,000	670,000			5,733		670,000	675,733
1929		537,000	537,000			5,226		537,000	542,226
1930		633,000	633,000			3,660		633,000	636,660
1931	26,693	565,000	591,693			3,473	26,693	565,000	595,166
1932	27,899	1,092,000	1,119,899			4,200	27,899	1,092,000	1,124,099
1933	28,779	603,000	631,779			3,333	28,779	603,000	635,112
1934	23,365	474,000	497,365			2,000	23,365	474,000	499,365
1935	27,665	537,000	564,665			3,466	27,665	537,000	568,131
1936	43,713	560,000	603,713			3,400	43,713	560,000	607,113
1937	12,154	346,000	358,154			3,746	12,154	346,000	361,900
1938	32,971	340,450	373,421			860	32,971	340,450	374,281
1939	28,037	327,650	355,687			720	28,037	327,650	356,407
1940	32,453	1,029,000	1,061,453			1,153	32,453	1,029,000	1,062,606
1941	47,608	438,000	485,608			2,806	47,608	438,000	488,414
1942	22,487	197,000	219,487			713	22,487	197,000	220,200
1943	27,650	200,000	227,650			609	27,650	200,000	228,259
1944	14,232		14,232			986	14,232		15,218
1945	19,727		19,727			1,333	19,727		21,060
1946	22,782		22,782			353	22,782		23,135
1947	54,026		54,026			120	54,026		54,146
1948	33,842		33,842				33,842		33,842
1949	36,379		36,379				36,379		36,379
1950	41,808		41,808				41,808		41,808
1951	56,278		56,278				56,278		56,278
1952	38,637	10,868	49,505				38,637	10,868	49,505
1953	58,859	385,977	444,836				58,859	385,977	444,836
1954	64,545	14,375	78,920				64,545	14,375	78,920
1955	55,925		55,925				55,925		55,925
1956	62,208	10,743	72,951				62,208	10,743	72,951
1957	63,623		63,623				63,623		63,623
1958	75,625	337,500	413,125	11,000	1,500	12,500	86,625	339,000	425,625
1959	78,370		78,370	8,434	3,098	11,532	86,804	3,098	89,902
1960	67,957		67,957	11,050	13,922	24,972	78,647	13,922	92,569
1961	141,748	452,521	594,269	13,822	9,078	22,900	155,570	461,599	617,169
1962	105,844	425,277	531,071	14,537	10,236	24,773	120,381	435,463	555,844
1963	141,856	401,697	543,553	10,931	27,692	38,083	152,247	429,389	581,636
1964	109,818	492,233	602,051	9,854	6,110	15,904	119,672	498,343	618,015
1965	134,706	472,798	607,504	5,380	11,871	17,251	140,086	484,669	624,755
1966	104,887	296,310	401,197	4,642	11,757	16,399	109,529	308,067	417,596
1967	146,154	335,477	481,631	5,400	16,943	22,343	151,554	352,420	503,974
1968	118,632	259,205	377,837	5,112	11,535	16,647	123,744	270,740	394,484
1969	104,223	415,095	519,318	2,640	7,779	10,419	106,863	422,874	529,737
1970	94,143	580,974	675,117	4,711	3,679	8,390	98,854	584,653	683,507
1971	136,191	530,536	666,727	5,978	15,761	21,739	142,169	546,297	688,466
1972	113,098	454,085	567,183	3,426	10,532	13,958	116,254	464,617	581,141
1973	99,670	769,358	869,028	3,987	9,166	13,153	103,657	778,524	882,181
1974	117,883	1,217,070	1,334,953	5,593	11,646	17,239	123,476	1,228,716	1,352,192
1975	76,785	1,285,684	1,362,469	6,000	20,600	26,600	82,785	1,306,284	1,389,069
1976	106,477	1,025,905	1,132,382	5,000	4,425	9,425	111,477	1,030,330	1,141,807
1977	113,995	1,094,008	1,208,003	7,427	12,511	19,938	121,422	1,106,519	1,227,941
1978	124,993	1,608,370	1,733,363	5,881	9,566	15,447	130,874	1,617,936	1,748,810
1979	160,061	1,622,418	1,782,479	10,375	22,084	32,459	170,436	1,644,502	1,814,938
1980	197,812	1,829,838	2,027,650	25,000	23,500	48,500	222,812	1,853,338	2,076,150
1981	187,297	2,119,610	2,306,907	17,437	22,589	40,026	204,734	2,142,199	2,346,933
1982	151,817	1,306,137	1,457,954	16,867	14,617	31,484	168,684	1,320,754	1,489,438

1/ Does not include subsistence catches ffrom the villages outside of the Yukon River mouth.
2/ Mostly chum salmon, but includes small numbers of pink and coho salmon.
3/ Data source for Alaska commercial catches: USFWS Stat. Digest No. 50 for the years 1951-59, unless otherwise indicated.
4/ Data source: Alaska Fisheries and Fur-Seal Industry Report for 1954.
5/ Includes small numbers of pink or red salmon (less than 300).
6/ Data source for Alaska commercial catches: ADF&G Stat. Leaflets for years since 1960.
7/ Data source: Environment Canada, Fisheries Service (Whitehorse) since 1958.
8/ Catch data for years 1903-1947 obtained by dividing total poundage of mixed salmon by an arbitrary weight of 15 lbs. Species breakdown is unknown. Fisgures are considered conservative (data collected by Royal Canadian Mounted Police).

Appendix Table 2. Commercial salmon catches by species and districts, Yukon area, 1960-1982.

KING SALMON

Year	Lower Yukon Area				Upper Yukon Area				Totals
	334-10	334-20	334-30	Subtotals	334-40	334-50	334-60	Subtotals	
1960	50,713	15,994	-	66,707	-	-	-	884	67,591
1961	84,463	29,028	4,965	118,456	-	-	-	1,804	120,260
1962	67,099	22,224	4,687	94,010	-	-	-	724	94,734
1963	85,004	24,211	6,976	116,191	-	-	-	803	116,994
1964	67,555	20,246	4,705	92,506	-	-	-	1,081	93,587
1965	89,268	23,763	3,204	116,235	-	-	-	1,863	118,098
1966	70,788	16,927	3,612	91,327	-	-	-	1,988	93,315
1967	104,350	20,289	3,618	128,257	-	-	-	1,449	129,706
1968	79,465	21,392	4,543	105,400	-	-	-	1,126	106,526
1969	70,862	14,799	3,577	89,238	-	-	-	985	90,223
1970	57,681	17,210	3,712	78,603	-	-	-	1,666	80,269
1971	86,042	19,226	3,490	108,758	-	-	-	1,749	110,507
1972	70,052	17,855	3,841	91,748	-	-	-	1,092	92,840
1973	56,981	13,859	3,204	74,044	-	-	-	1,309	75,353
1974	71,680	17,947	3,471	93,098	685	2,663	1,457	4,805	97,903
1975	44,585	11,187	4,207	59,979	389	2,872	500	3,761	63,740
1976	62,632	17,413	4,239	84,284	385	2,900	1,102	4,387	88,671
1977	69,456	16,781	3,943	90,180	959	4,267	1,008	6,234	96,414
1978	57,890	32,335	2,917	93,142	701	3,115	644	4,460	97,602
1979	76,269	41,357	5,108	122,734	1,969	3,520	833	6,322	129,056
1980	90,089	50,824	5,240	146,153	1,521	5,338	2,076	8,935	155,088
1981	99,219	45,302	4,023	148,544	1,347	6,452	1,264	9,063	157,607
1982	74,451	39,132	2,609	116,192	1,107	5,379	981	7,467	123,659

COHO SALMON

Year	Lower Yukon Area				Upper Yukon Area				Totals
	334-10	334-20	334-30	Subtotals	334-40	334-50	334-60	Subtotals	
1960	-	-	-	-	-	-	-	-	-
1961	2,855	-	-	2,855	-	-	-	-	2,855
1962	22,926	-	-	22,926	-	-	-	-	22,926
1963	5,572 1/	-	-	5,572	-	-	-	-	5,572
1964	2,446	-	-	2,446	-	-	-	-	2,446
1965	350	-	-	350	-	-	-	-	350
1966	19,254	-	-	19,254	-	-	-	-	19,254
1967	9,925	-	1,122	11,047	-	-	-	-	11,047
1968	13,153	-	150	13,303	-	-	-	-	13,303
1969	14,041	-	845	14,886	-	-	-	95	14,981
1970	12,245	-	-	12,245	-	-	-	-	12,245
1971	12,165	-	-	12,165	-	-	-	38	12,203
1972	21,705	506	-	22,211	-	-	-	22	22,233
1973	34,860	1,781	-	36,641	-	-	-	-	36,641
1974	13,728	176	-	13,904	-	909	1,427	2,336	16,240
1975	2,288	-	-	2,288	-	5	53	58	2,346
1976	4,084	17	-	4,101	-	-	1,096	1,096	5,197
1977	30,588	5,312	521	36,421	-	-	1,600	1,600	38,021
1978	16,262	5,835	758	22,855	32	7	3,066	3,105	25,960
1979	11,244	2,920	-	14,164	155	-	2,791	2,946	17,110
1980	4,828	2,660	-	7,488	-	27	1,226	1,253	8,741
1981	13,154	7,837	427	21,418	-	-	2,284	2,284	23,702
1982	15,115	14,179	87	29,381	15	-	7,780	7,795	37,176

Appendix Table 2. (Continued)

CHUM SALMON

Year	Lower Yukon Area 334-10	334-20	334-30	Subtotals	Upper Yukon Area 334-40	334-50	334-60	Subtotals	Totals
1960	-	-	-	-	-	-	-	-	-
1961	42,577 1/	-	-	42,577	-	-	-	-	42,577
1962	53,160 1/	-	-	53,160	-	-	-	-	53,160
1963	-	-	-	-	-	-	-	-	-
1964	8,347	-	-	8,347	-	-	-	-	8,347
1965	22,936	-	-	22,936	-	-	-	381	23,317
1966	69,836	-	1,209	71,045	-	-	-	-	71,045
1967	41,148	1,425	1,880	49,453	-	-	-	-	49,453
1968	62,852 1/	1,407	3,136	67,395	-	-	-	-	67,395
1969	184,411	5,024	1,722	191,157	-	-	-	703	191,860
1970	320,138	22,394	3,285	346,357	-	-	-	907	346,724
1971	282,461	6,112	50	288,623	-	-	-	1,061	289,684
1972	250,945	33,805	1,840	286,590	-	-	-	1,254	287,844
1973	395,431 1/	109,138 1/	463	505,032	-	-	-	13,003	518,035
1974	641,663	127,644	2,273	771,580	37,079	30,382	40,187	107,648	879,228
1975	576,607	150,259	5,590	732,456	178,720	40,209	33,474	252,403	984,859
1976	382,216	120,959	14,504	517,679	213,019	6,247	24,564	243,830	761,509
1977	385,972	159,051	19,310	564,333	183,932	26,801	22,595	233,328	797,661
1978	523,557	277,086	38,728	839,371	375,617	25,907	47,934	449,458	1,288,829
1979	491,475	270,979	69,395	831,849	222,653	57,282	54,196	334,131	1,165,980
1980	497,853	394,412	58,090	950,355	304,370	42,802	58,357	405,529	1,355,884
1981	675,463	506,341	73,862	1,255,486	262,983	95,929	63,473	422,385	1,677,871
1982	346,862	278,939	9,901	635,702	158,989	13,912	30,598	203,499	839,201

TOTAL SALMON

Year	Lower Yukon Area 334-10	334-20	334-30	Subtotals	Upper Yukon Area 334-40	334-50	334-60	Subtotals	Totals
1960	50,713	15,994	-	66,707	-	-	-	884	67,591
1961	129,895	29,028	4,965	163,888	-	-	-	1,804	165,692
1962	143,185	22,224	4,687	170,096	-	-	-	724	170,820
1963	90,576	24,211	6,976	121,763	-	-	-	803	122,566
1964	78,348	20,246	4,705	103,299	-	-	-	1,081	104,380
1965	112,554	23,763	3,204	139,521	-	-	-	2,244	141,765
1966	159,878	16,927	4,821	181,626	-	-	-	1,988	183,614
1967	160,423	21,714	6,620	188,757	-	-	-	1,449	190,206
1968	155,470	22,799	7,829	186,098	-	-	-	1,126	187,224
1969	269,314	19,823	6,144	295,281	-	-	-	1,783	297,064
1970	390,064	39,604	6,997	436,665	-	-	-	2,573	439,238
1971	380,668	25,338	3,540	409,546	-	-	-	2,848	412,394
1972	342,702	52,166	5,681	400,549	-	-	-	2,368	402,917
1973	487,272 1/	124,778 1/	3,667	615,717	-	-	-	14,312	630,029
1974	727,071	145,767	5,774	875,034	37,764	33,954	43,071	114,789	989,823
1975	623,480	161,446	9,797	794,723	179,109	43,086	34,027	256,222	1,050,945
1976	448,932	138,389	18,743	606,064	213,404	9,147	26,762	249,313	855,377
1977	486,016	181,144	23,744	690,934	184,891	31,068	25,203	241,162	932,096
1978	597,709	315,256	42,403	955,368	376,350	29,029	51,644	457,023	1,412,391
1979	578,988	315,256	74,503	968,747	224,777	60,802	57,820	343,399	1,312,146
1980	592,770	447,890	63,330	1,103,996	305,918	48,140	61,659	415,717	1,519,713
1981	787,836	559,480	78,132	1,425,448	264,330	102,381	67,021	433,732	1,859,180
1982	436,428	332,250	12,597	781,275	160,111	19,291	39,359	218,761	1,000,036

1/ Includes small number of pink or red salmon.

Appendix Table 3. Commercial Fisheries Entry Commission (C.F.E.C.) permits issued by gear type, Yukon area, 1976-1982.

	Number of GILLNET Permits 5/		
Year	Lower Yukon 1/ 2/	Upper Yukon 3/ 4/	Total
1976	678	118	796
1977	691	66	757
1978	694	68	762
1979	700	64	764
1980	686	78	764
1981	689	72	761
1982	676	70	746

	Number of FISHWHEEL Permits 5/
Year	Upper Yukon 4/
1976	169
1977	161
1978	161
1979	166
1980	164
1981	175
1982	163

1/ Information obtained from Commercial Fisheries Entry Commission Annual Reports.
2/ Set or drift gillnet.
3/ Set gillnet only.
4/ Includes Interim-use permits.
5/ Does not include tranfers.

Appendix Table 4. Actual number of commercial salmon fishing gear operators (vessels) by district, Yukon area, 1971-1982. 1/

KING SALMON SEASON

	Lower Yukon Area				Upper Yukon Area				
Year	334-10	334-20	334-30	Subtotals	334-40	334-50	334-60	Subtotals	Total
1971	405	154	33	592	–	–	–	–	–
1972	426	153	35	614	–	–	–	–	–
1973	438	167	38	643	–	–	–	–	–
1974	396	154	42	592	27	31	20	78	670
1975	441	149	37	627	93	52	36	181	808
1976	453	189	42	684	80	46	29	155	839
1977	392	188	46	626	87	41	18	146	772
1978	429	204	22	655	80	45	35	160	815
1979	425	210	22	657	87	34	30	151	808
1980	407	229	21	657	79	35	33	147	804
1981	448	225	23	696	80	43	26	149	845
1982	450	225	21	696	74	44	20	138	834

FALL SEASON

	Lower Yukon Area 2/				Upper Yukon Area 3/				
Year	334-10	334-20	334-30	Subtotals	334-40	334-50	334-60	Subtotals	Total
1971	352	–	–	352	–	–	–	–	–
1972	353	75	3	431	–	–	–	–	–
1973	445	183	–	628	–	–	–	–	–
1974	322	121	6	449	17	23	22	62	511
1975	428	185	12	625	44	33	33	110	735
1976	422	194	28	644	18	36	44	98	742
1977	337	172	37	546	28	34	32	94	640
1978	429	204	28	661	24	43	30	127	788
1979	458	220	32	710	31	44	37	112	822
1980	395	232	23	650	33	43	26	102	752
1981	462	240	21	723	30	50	30	110	833
1982	445	218	15	678	15	24	25	64	742

COMBINED SEASONS

	Lower Yukon Area				Upper Yukon area				
Year	334-10	334-20	334-30	Subtotals	334-40	334-50	334-60	Subtotals	Total
1971	473	154	33	660	–	–	–	27	687
1972	476	153	35	664	–	–	–	–	664
1973	529	205	38	772	–	–	–	47	819
1974	485	190	42	717	28	43	27	98	815
1975	491	197	39	727	95	57	46	198	925
1976	482	220	44	746	96	62	56	214	960
1977	402	208	54	664	96	53	39	188	852
1978	472	221	29	722	82	53	38	173	895
1979	461	230	33	724	90	49	40	179	903
1980	432	247	27	706	88	51	38	177	883
1981	507	257	26	790	94	56	31	186	976
1982	486	244	22	752	76	53	27	156	908

1/ Actual number of gear operators which made at least one delivery. Data presentsented shows the number of gear operators in each district. Some individual fishermen in the lower Yukon area may have operated in more than one district. during the year.

2/ "Fall Season" (or second season) refers to period when 6" or smaller mesh size restriction is in effect.

3/ "Fall Season" refers to period when fall chum salmon fishery occurs.

Appendix Table 5. Commercial king slamon catches by statistical area, Lower lower Yukon 1971-1982.

District 334-10

	334-11	334-12	334-13	334-14	334-15	334-16	334-17	334-18	Total
1971	3,038	25,679	7,204	10,576	17,140	3,949	12,446	6,010	86,042
1972	2,845	12,307	3,608	9,403	18,582	5,331	13,469	4,507	70,052
1973	7,475	29,962	4,657	3,644	1,374	276	7,184	2,409	56,981
1974	3,093	29,082	7,062	3,982	13,003	2,084	6,811	5,950	71,067
1975	7,275	15,712	8,698	308	1,744	606	7,144	3,710	45,197
1976	8,343	28,117	7,575	852	5,081	1,444	6,156	5,064	62,632
1977	11,167	16,968	8,174	915	15,533	1,550	7,084	8,065	69,456
1978	1,154	12,175	4,128	4,372	20,797	3,628	7,422	4,214	57,890
1979	970	13,541	4,052	5,992	13,144	10,897	19,287	8,386	76,269
1980	456	12,696	3,162	9,871	30,482	12,361	13,060	8,001	90,089
1981	6,222	12,892	2,986	9,055	19,771	15,282	22,132	10,879	99,219
1982	3,440	11,268	2,842	9,038	9,331	7,295	18,185	13,052	74,451

District 334-20

	334-21	334-22	334-23	334-24	334-25	Total
1971	5,926	7,893	3,061	2,346	-	19,226
1972	1,839	11,216	1,426	3,374	-	17,855
1973	5,959	5,574	1,106	1,220	-	13,859
1974	6,270	5,032	2,612	3,673	-	17,587
1975	2,413	3,029	1,787	2,595	-	9,824
1976	5,111	4,511	3,056	4,735	-	17,413
1977	6,580	4,623	2,113	3,465	-	16,781
1978	8,868	7,690	5,086	8,439	2,252	32,335
1979	10,810	10,904	6,733	7,673	5,237	41,357
1980	11,588	13,795	8,152	8,575	8,714	50,824
1981	11,901	13,357	7,065	5,908	7,071	45,302
1982	10,567	9,236	5,262	8,932	5,135	39,132

District 334-30

	334-31	334-32	Total
1971	1,352	2,138	3,490
1972	1,783	2,058	3,841
1973	2,264	940	3,204
1974	1,196	2,217	3,413
1975	2,761	1,416	4,177
1976	1,827	2,412	4,239
1977	1,741	2,202	3,943
1978	747	2,170	2,917
1979	2,111	2,997	5,108
1980	2,803	2,437	5,240
1981	1,241	2,782	4,023
1982	896	1,713	2,609

Appendix Table 6. Commercial king salmon catches by statistical area, upper Yukon area, 1974-1982.

District 334-40

	334-41	334-42	334-43	Total
1974	-	679	-	679
1975	15	374	-	389
1976	32	353	-	385
1977	305	654	-	959
1978	276	425	-	701
1979	791	344	834	1,969
1980	352	538	631	1,521
1981	106	867	374	1,347
1982	78	509	520	1,107

District 334-50

	334-51	334-52	334-53	334-54	Total
1974	2,282	379	-	-	2,661
1975	2,602	263	-	-	2,865
1976	2,593	307	-	-	2,900
1977	3,984	283	-	-	4,267
1978	2,874	241	-	-	3,115
1979	3,455	65	-	-	3,520
1980	4,940	398	-	-	5,338
1981	97	2,970	2,636	749	6,452
1982	61	2,339	2,284	695	5,379

District 334-60

	334-61	334-62	334-63	Total
1974	111	1,086	260	1,457
1975	77	130	253	460
1976	503	295	304	1,102
1977	477	365	166	1,008
1978	38	62	544	644
1979	101	362	370	833
1980	92	1,651	333	2,076
1981	438	588	238	1,264
1982	414	309	258	981

Appendix Table 7. Comparitive commercial catches of king and summer chum salmon by mesh size, lower Yukon area, 1961-1982.

	No Mesh Size Restrictions 1/ Districts 334-10, 334-20 & 334-30		5-1/2 - 6 inch Mesh Size 2/ Districts 334-10, 334-20 & 334-30	
	Kings	Summer Chums	Kings	Summer Chums
1961	118,399	-	-	-
1962	93,983	-	-	-
1963	116,191	-	-	-
1964	92,506	-	-	-
1965	116,235	-	-	-
1966	91,322	-	-	-
1967	128,242	10,976	-	-
1968	105,385	14,470	-	-
1969	88,964	41,418	97	19,151
1970	78,424	104,705	119	32,663
1971	107,113	42,239	1,176	57,851
1972	89,217	79,225	2,254	56,443
(Avg. 1961-72)	(102,165)	(48,839)	(912)	(41,527)
1973 3/	68,473	89,304	5,168	196,540
1974	90,334	351,363	1,631	227,507
1975	54,791	148,919	4,247	376,557
1976	75,758	275,986	7,563	123,457
1977	85,011	161,368	4,907	227,038
1978	84,727	278,259	8,010	374,741
1979	98,210	137,083	24,153	477,518
1980	124,808	96,042	21,164	654,281
1981	128,918	165,017	19,281	748,709
1982	109,007	229,192	7,184	217,555
(Avg. 1973-82)	(92,004)	(193,253)	(10,331)	(362,390)

1/ Primarily 8-8-1/2 inch mesh size used during early June - early July.
2/ Catch through July 15-19, relatively few kings and summer chums taken after these dates.
3/ Six inch maximum size regulation beginning late June-early July became effective in districts 334-10 and 334-20.

Appendix Table 8. Comparative commercial king salmon catch data, Yukon area, 1960-1982. 1/

	YEAR	334-10	334-20	Sub-Total (10+20)	334-30
Commercial Catch	1960	50,713	15,994	66,707	-
	1961	84,406	29,028	113,434	4,965
	1962	67,072	22,224	89,296	4,687
	1963	85,004	24,211	109,215	6,976
	1964	67,555	20,246	87,801	4,705
	1965	89,268	23,763	113,031	3,204
	1966	70,783	16,927	87,710	3,612
	1967	104,335	20,289	124,624	3,618
	1968	79,465	21,392	100,857	4,543
	1969	70,588	14,799	85,387	3,577
	1970	57,502	17,210	74,712	3,712
	1971	84,397	19,226	103,623	3,490
	1972	68,059	17,317	85,376	3,841
	1973	52,790	12,479	65,269	3,204
	1974	69,457	17,464	86,921	3,413
	1975	41,550	9,064	50,614	4,177
	1976	56,392	15,296	71,688	4,070
	1977	65,745	15,328	81,073	3,938
	1978	53,198	28,872	82,070	2,657
	1979	61,790	33,347	95,137	3,073
	1980	78,157	42,755	120,912	3,896
	1981	88,038	37,660	125,698	3,220
	1982	70,743	35,656	106,399	2,608
Boat Hours (Catch per boat hour)	1960	40,848 (1.24)	34,914 (0.46)	75,762 (0.88)	-
	1961	79,224 (1.07)	29,118 (1.00)	108,342 (1.05)	2,808 (1.77)
	1962	84,792 (0.79)	38,118 (0.58)	122,910 (0.73)	2,620 (1.86)
	1963	72,288 (1.18)	27,672 (0.87)	99,960 (1.09)	5,616 (1.24)
	1964	56,736 (1.19)	22,398 (0.91)	79,134 (1.11)	4,596 (1.02)
	1965	78,096 (1.14)	31,008 (0.77)	109,104 (1.04)	2,296 (1.40)
	1966	69,894 (1.01)	22,380 (0.76)	92,274 (0.95)	1,782 (1.23) 2/
	1967	102,456 (1.02)	37,488 (0.54)	139,944 (0.89)	4,050 (0.89)
	1968	92,450 (0.86)	32,280 (0.66)	124,730 (0.81)	3,745 (1.21)
	1969	84,864 (0.83)	27,828 (0.53)	112,692 (0.76)	3,577 (0.72)
	1970	61,260 (0.94)	20,460 (0.84)	81,720 (0.91)	3,566 (1.04)
	1971	73,272 (1.15)	19,956 (0.96)	93,228 (1.11)	4,790 (0.73)
	1972	79,236 (0.86)	19,872 (0.87)	99,108 (0.86)	5,916 (0.65)
	1973	75,036 (0.70)	23,496 (0.63)	98,532 (0.66)	7,282 (0.44)
	1974	86,256 (0.80)	29,808 (0.60)	116,064 (0.75)	7,032 (0.49)
	1975	49,944 (0.83)	8,376 (1.08)	58,320 (0.67)	3,552 (1.18)
	1976	64,572 (0.87)	23,484 (0.65)	88,160 (0.81)	4,392 (0.92)
	1977	42,618 (1.54)	15,180 (1.01)	57,798 (1.40)	3,636 (1.08)
	1978	57,528 (0.92)	25,524 (1.13)	83,052 (0.99)	1,872 (1.42)
	1979	53,040 (1.17)	23,904 (1.39)	76,944 (1.24)	1,464 (2.10)
	1980	45,348 (1.73)	20,196 (2.12)	65,544 (1.85)	1,368 (2.85)
	1981	43,632 (2.02)	19,536 (1.93)	63,168 (1.99)	552 (5.83)
	1982	55,416 (1.28)	22,008 (1.62)	77,424 (1.37)	1,464 (1.78)

1/ 334-10 and 334-20 data are only for the king salmon season (June & early July).
2/ Catch per vessel hour does not include 1,421 king salmon captured by an unknown number of fishermen.

Appendix Table 9. Comparative king salmon commercial catch data by date, king salmon season, district 334-10, Yukon area, 1961-1982.

	Cumulative catch 1/ (Cumulative catch /boat hour) 2/										
Date	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
6/1							4.4(0.41)				
6/2											
6/3											
6/4									3.8(0.42)		
6/5			0.7(0.26)					0.1(0.05)			
6/6										0.01(0.03)	
6/7							21.3(0.85)		8.1(0.34)		
6/8	3.6(0.32)		4.7(0.45)					1.4(0.18)			
6/9					0.6(0.17)						
6/10							37.9(0.98)			0.5(0.16)	
6/11						0.6(0.16)			26.8(0.75)		
6/12			16.9(0.87)		4.1(0.31)			11.3(0.62)			0.03(0.15)
6/13										3.0(0.32)	
6/14		8.0(0.57)					62.7(1.18)		41.7(0.79)		
6/15	46.6(1.61)		34.3(1.14)			4.8(0.38)		25.7(0.76)			
6/16					19.3(0.85)						1.2(0.29)
6/17				0.2(0.11)			66.5(0.99)			8.4(0.48)	
6/18						23.1(0.86)			47.9(0.75)		
6/19			50.3(1.27)		42.7(1.22)			31.8(0.69)			5.1(0.30)
6/20				9.5(0.88)					58.3(0.82)	32.7(1.07)	
6/21		27.5(0.76)					83.4(1.02)				
6/22	66.6(1.42)		56.8(1.13)			40.9(1.00)		56.7(0.90)			
6/23					69.1(1.47)						18.2(0.61)
6/24				37.0(1.80)			98.0(1.02)		66.3(0.85)	39.3(0.97)	
6/25						54.4(1.06)					
6/26			72.0(1.23)		77.2(1.32)			70.3(0.94)		50.2(1.07)	40.7(0.88)
6/27				48.5(1.54)			104.3(1.02)				
6/28		62.3(0.95)				66.7(1.08)			70.6(0.83)		
6/29	79.0(1.23)		83.1(1.22)		81.0(1.18)			77.9(0.90)			
6/30				55.3(1.38)							75.3(1.29)
7/1										55.8(0.99)	
7/2						70.8(1.01)					
7/3			85.0(1.18)		89.3(1.14)			79.5(0.86)		57.5(0.94)	84.4(1.15)
7/4				65.3(1.32)							
7/5		67.1(0.79)									
7/6	84.4(1.07)										
7/7											
7/8				67.6(1.19)							

Appendix Table 9. (Continued)

	Cumulative catch 1/ (Cumulative catch /boat hour) 2/										
Date	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
6/1											
6/2											
6/3											
6/4											
6/5			3.5(0.46)					6.1(0.81)			
6/6		0.3(0.15)									
6/7										11.1(1.49)	
6/8			11.0(0.60)					11.0(0.71)			
6/9		2.8(0.25)					2.5(0.35)			26.7(1.68)	
6/10	0.04(0.08)								6.8(1.01)		
6/11				0.2(0.09)							
6/12			25.7(0.82)					30.5(1.26)		41.2(1.69)	
6/13		9.4(0.44)					8.3(0.56)				
6/14	1.04(0.17)			0.6(0.11)		0.04(0.05)			32.9(1.63)		
6/15			36.8(0.84)								5.6(0.69)
6/16		21.5(0.59)			0.1(0.06)			39.8(1.08)		59.5(1.75)	
6/17	4.5(0.24)						25.9(0.91)		47.5(1.67)		
6/18				1.7(0.17)		2.6(0.41)					18.0(1.00)
6/19			55.6(0.99)		3.3(0.27)			56.5(1.23)		88.0(2.02)	
6/20		30.6(0.65)					33.4(0.91)				
6/21	21.5(0.68)			7.4(0.39)		13.0(0.92)			73.7(1.80)		
6/22			58.5(0.96)					61.8(1.17)			38.0(1.41)
6/23		42.6(0.68)			12.9(0.49)				78.2(1.72)		
6/24	37.8(0.77)						47.8(0.96)				
6/25				24.5(0.75)		39.3(1.50)					45.1(1.24)
6/26			65.7(0.90)		28.3(0.69)						
6/27		52.8(0.70)		34.3(0.83)			53.2(0.92)				
6/28	53.2(0.86)					57.0(1.62)					
6/29			69.5(0.80)								63.2(1.38)
6/30					42.1(0.76)						
7/1	68.1(0.86)			41.6(0.83)		65.7(1.54)					
7/2					56.4(0.87)						70.7(1.28)
7/3											
7/4											
7/5											
7/6											
7/7											
7/8											

1/ Cumulative catch in thousands of fish by period for the king salmon season (June & early July).
2/ Boat hours computed by multiplying the number of hours in the period by number of boats making at least on delivery during the period; however for the years 1961-1966 the number of boat in the period was obtained by using the greatest number of boats making one delivery during any day of the period.

Appendix Table 10. Commercial salmon catches taken under quota or guideline harvest level ranges, Yukon area, 1974-1982.

KING SALMON 1/

	Lower Yukon Area		Upper Yukon Area		
District	334-10 and 334-20	334-30	334-40	334-50	334-60
1974	-	3,413 (3,000)	679 (1,000)	2,661 (3,000)	1,458 (1,000)
1975	-	4,177 (3,000)	389 (1,000)	2,865 (3,000)	460 (1,000)
1976	-	4,070 (3,000)	385 (1,000)	2,900 (3,000)	1,102 (1,000)
1977	-	3,938 (3,000)	959 (1,000)	4,266 (3,000)	1,008 (1,000)
1978	-	2,657 (3,000)	701 (1,000)	3,115 (3,000)	1,644 (1,000)
1979 2/	-	3,073 (1,800-2,200)	1,232 (900-1,100)	3,520 (2,700-3,300	833 (900-1,000)
1980	-	3,896 (1,800-2,200)	1,517 (900-1,100)	5,383 (2,700-3,000)	2,076 (900-1,100)
1981	144,521 (60,000-120,000)	3,220 (1,800-2,200)	1,347 (2,250-2,850)	6,452 (2,700-3,000)	1,264 (600-800)
1982	113,583 (60,000-120,000)	2,609 (1,800-2,200)	1,107 (2,250-2,850)	5,379 (2,700-3,300)	981 (600-800)

FALL CHUM AND COHO SALMON 1/

	Lower Yukon Area 3/	Upper Yukon Area 4/		
District	334-10,334-20 and 334-20	334-40 5/	334-50	334-60
1974	230,128 (200,000)	9,213 (10,000)	25,051 (25,000)	26,192 (15,000)
1975	215,439 (200,000)	13,552 (10,000)	27,212 (25,000)	18,735 (15,000)
1976	131,313 (200,000)	1,742 (10,000)	5,387 (25,000)	19,051 (15,000)
1977	199,603 (200,000)	13,996 (10,000)	25,695 (25,000)	19,910 (15,000)
1978	191,120 (200,000)	11,262 (10,000)	21,017 (25,000)	16,325 (15,000)
1979 2/	229,403 (120,000-220,000)	50,375 (10,000-40,000)	51,161 (10,000-40,000)	34,316 (7,500-22,500)
1980	204,229 (120,000-220,000)	32,058 (10,000-40,000)	42,343 (10,000-40,000)	20,746 (7,500-22,500)
1981	341,760 (120,000-220,000)	19,447 (10,000-40,000)	95,844 (10,000-40,000)	29,008 (5,500-20,500)
1982	199,880 (120,000-220,000)	4,076 (10,000-40,000)	13,678 (10,000-40,000)	15,196 (5,500-20,500)

1/ Quotas or guideline harvest level shown in parenthesis.
2/ Beginning in 1979, quotas were replaced by guideline harvest level ranges.
3/ Chum salmon only; coho salmon catch not applied toward quotas or G.H.L.
4/ Chum and coho salmon combined; mostly fall chum.
5/ Beginning in 1978 quota or guideline harvest levels in effect for area upstream of Cone Point only. Subdistrict 4-A closed August 1.

Appendix Table 11. Commercial chum salmon catches by statistical area, lower Yukon area, 1971-1982.

District 334-10

	334-11	334-12	334-13	334-14	334-15	334-16	334-17	334-18	Total
1971	834	87,740	24,766	34,891	40,617	8,063	67,635	17,915	282,461
1972	5,186	98,909	12,146	25,943	56,039	4,073	38,274	10,375	250,945
1973	17,259	176,119	39,583	18,607	61,970	6,413	52,770	22,706	395,427
1974	38,272	326,371	127,228	20,878	49,982	5,014	36,232	36,715	641,052
1975	33,095	254,300	103,573	12,773	46,113	5,779	99,728	28,354	583,715
1976	26,336	205,416	52,460	9,417	28,423	4,227	32,024	23,913	382,216
1977	34,145	184,735	53,772	9,660	43,344	1,033	40,579	18,754	385,972
1978	5,108	195,699	67,397	57,320	79,827	5,742	75,436	37,028	523,557
1979	1,539	118,868	39,014	43,503	94,089	47,900	97,804	48,758	491,475
1980	3,282	81,904	16,983	45,759	87,476	98,474	110,406	53,569	497,853
1981	25,443	207,295	26,713	75,559	92,368	51,746	142,673	53,666	675,463
1982	9,992	83,145	17,753	54,795	56,632	20,602	60,253	43,760	346,862

District 334-20

	334-21	334-22	334-23	334-24	334-25	Total
1971	2,255	3,144	286	427	-	6,112
1972	3,091	22,746	250	7,718	-	33,805
1973	22,207	56,528	6,181	24,125	-	109,041
1974	38,273	51,108	11,187	25,253	-	125,821
1975	20,887	99,651	11,028	20,044	-	151,610
1976	22,027	58,693	18,237	22,002	-	120,959
1977	26,488	76,320	23,664	32,579	-	159,051
1978	48,090	131,141	31,403	60,800	5,652	277,086
1979	75,813	86,886	30,565	33,321	44,394	270,979
1980	81,607	157,848	76,136	46,882	31,939	394,412
1981	75,600	215,019	89,549	78,528	47,645	506,341
1982	60,625	103,689	27,600	61,685	25,340	278,939

District 334-30

	334-31	334-32	Total
1971	26	24	50
1972	-	527	527
1973	-	463	463
1974	2,047	110	2,157
1975	-	5,590	5,590
1976	4,450	10,054	14,504
1977	12,877	6,433	19,310
1978	20,320	18,498	38,728
1979	26,807	42,588	69,395
1980	23,261	34,829	58,090
1981	35,765	37,917	73,862
1982	3,896	6,005	9,901

Appendix Table 12. Commercial chum salmon catches by statistical area, upper Yukon area, 1974-1982. 1/

District 334-40

	334-41	334-42	334-43	Total
1974	1,200 (2/)	37,714 (2/)	-	38,914 (9.2)
1975	107,813 (2.1)	70,908 (11.4)	-	178,721 (13.5)
1976	178,708 (0.5)	34,311 (1.3)	-	213,019 (1.8)
1977	150,425 (1.7)	33,140 (12.3)	-	183,556 (14.0)
1978	309,484 (-)	66,133 (11.2)	-	375,617 (11.2)
1979	138,443 (-)	58,407 (28.6)	25,803 (21.8)	222,653 (50.4)
1980	229,450 (-)	56,058 (17.1)	18,862 (14.9)	304,370 (32.0)
1981	209,540 (-)	42,738 (10.8)	10,660 (8.7)	262,983 (19.4)
1982	138,643 (-)	14,587 (1.0)	5,759 (3.1)	158,989 (4.1)

District 334-50

	334-51	334-52	334-53	334-54	Total
1974	27,860 (2/)	153 (2/)	-	-	28,013 (23.6)
1975	40,334 (27.2)	10 (-)	-	-	40,344 (27.2)
1976	6,175 (5.4)	72 (-)	-	-	6,247 (5.4)
1977	26,848 (25.7)	0	-	-	26,848 (25.7)
1978	25,570 (20.7)	337 (.3)	-	-	25,907 (21.0)
1979	56,447 (55.8)	835 (.8)	-	-	57,282 (56.6)
1980	40,763 (40.3)	2,039 (2.0)	-	-	42,802 (42.3)
1981	1,248 (1.2)	41,986 (41.9)	48,574 (48.6)	4,121 (4.1)	95,929 (95.8)
1982	8,307 (8.3)	1,296 (1.1)	4,309 (4.3)	0	13,912 (13.7)

District 334-60

	334-61	334-62	334-63	Total
1974	11,082 (9.6)	25,868 (15.4)	3,237 (1.9)	40,187 (26.9)
1975	18,761 (13.3)	5,147 (2.8)	9,424 (2.6)	33,332 (18.7)
1976	9,337 (6.4)	9,178 (8.0)	6,049 (3.6)	24,564 (18.0)
1977	5,945 (3.6)	12,420 (11.1)	4,586 (3.9)	22,951 (18.6)
1978	6,742 (4.7)	35,927 (8.0)	5,265 (0.5)	47,934 (13.2)
1979	7,736 (7.4)	36,271 (21.5)	9,863 (5.5)	54,196 (34.4)
1980	11,456 (6.3)	40,563 (11.2)	6,338 (2.0)	58,357 (19.5)
1981	9,537 (4.9)	46,096 (21.7)	7,840 (2.5)	63,473 (29.0)
1982	5,688 (0.7)	18,680 (5.2)	6,230 (1.5)	30,598 (7.4)

1/ Fall chum catch in thousands of fish shown in parenthesis.
2/ Information not available.

Appendix Table 13. Comparative summer and fall chum salmon commercial catches, Yukon area, 1971-1982.

SUMMER CHUMS									
	Lower Yukon Area				Upper Yukon Area				
Year	334-10	334-20	334-30	Sub-Total	334-40	334-50	334-60	Sub-Total	Total
1961	-	-	-	-	-	-	-	-	-
1962	-	-	-	-	-	-	-	-	-
1963	-	-	-	-	-	-	-	-	-
1964	-	-	-	-	-	-	-	-	-
1965	-	-	-	-	-	-	-	-	-
1966	-	-	-	-	-	-	-	-	-
1967	9,697	1,425	57	11,179	-	-	-	-	11,179
1968	12,995	1,407	68	14,470	-	-	-	-	14,470
1969	55,545	5,024	-	60,569	-	-	-	-	60,569
1970	119,832	17,536	-	137,368	-	-	-	-	137,368
1971	93,928	6,112	50	100,090	-	-	-	-	100,090
1972	114,234	20,907	527	135,668	-	-	-	-	135,668
1973	221,644	63,737	463	285,844	-	-	-	-	285,844
1974	479,554	72,281	1,605	553,440	29,701	4,462	13,303	47,466	600,906
1975	435,256	99,944	-	535,200	165,169	13,137	14,650	192,956	728,156
1976	269,523	99,747	10,254	379,524	211,277	860	6,566	218,703	598,227
1977	263,395	107,057	3,459	373,911	169,569	1,153	4,325	175,047	548,958
1978	388,492	225,400	27,201	641,133	364,387	4,897	34,675	403,959	1,045,092
1979	390,351	176,937	43,440	610,728	172,278	614	19,880	192,772	803,500
1980	391,024	310,531	44,571	746,126	272,339	459	38,837	311,635	1,057,761
1981	507,629	351,458	54,639	913,726	243,526	85	34,465	278,086	1,191,812
1982	249,378	182,358	4,086	435,822	154,928	234	23,182	178,344	614,166

Appendix Table 13. (Continued)

FALL CHUMS

Year	Lower Yukon Area 334-10	334-20	334-30	Sub-Total	Upper Yukon Area 334-40	334-50	334-60	Sub-Total	Total
1961	42,577 1/	-	-	42,577	-	-	-	-	42,577
1962	53,160 1/	-	-	53,160	-	-	-	-	53,160
1963	-	-	-	-	-	-	-	-	-
1964	8,347	-	-	8,347	-	-	-	-	8,347
1965	22,936	-	-	22,936	-	-	-	381	23,317
1966	69,836	-	1,209	71,045	-	-	-	-	71,045
1967	36,451	-	1,823	38,274	-	-	-	-	38,274
1968	49,857 1/	-	3,068	52,925	-	-	-	-	52,925
1969	128,866	-	1,722	130,588	-	-	-	703	131,291
1970	200,306	4,858	3,285	208,449	-	-	-	907	209,356
1971	188,533	-	-	188,533	-	-	-	1,061	189,594
1972	136,711	12,898	1,313	150,922	-	-	-	1,254	152,176
1973	173,783	45,304	-	219,087	-	-	-	13,003	232,090
1974	161,498	53,540	552	215,590	9,213	23,551	26,884	59,648	275,238
1975	148,459	51,666	5,590	205,715	13,552	27,207	18,682	59,441	265,156
1976	112,693	21,212	4,250	138,155	1,742	5,387	17,998	25,127	163,282
1977	122,577	51,994	15,851	190,422	13,996	25,695	18,626	58,317	248,739
1978	135,065	51,646	11,527	198,238	11,230	21,010	13,259	45,499	243,737
1979	101,124	94,042	26,955	221,121	50,375	56,668	34,316	141,359	363,480
1980	106,829	83,881	13,519	204,229	32,031	42,343	19,520	93,894	298,123
1981	167,834	154,883	19,043	341,760	19,447	95,844	29,008	144,299	486,059
1982	97,484	96,581	5,815	199,880	4,061	13,678	7,416	25,155	225,035

Appendix Table 13. (Continued)

TOTAL CHUMS

	Lower Yukon Area				Upper Yukon Area				
Year	334-10	334-20	334-30	Sub-Total	334-40	334-50	334-60	Sub-Total	Total
1961	42,577	-	-	42,577	-	-	-	-	42,577
1962	53,160	-	-	53,160	-	-	-	-	53,160
1963	-	-	-	-	-	-	-	-	-
1964	8,347	-	-	8,347	-	-	-	-	8,347
1965	22,936	-	-	22,936	-	-	-	381	23,317
1966	69,836	-	1,209	71,045	-	-	-	-	71,045
1967	46,148	1,425	1,880	49,453	-	-	-	-	49,453
1968	62,852	1,407	3,136	67,395	-	-	-	-	67,395
1969	184,411	5,024	1,722	191,157	-	-	-	703	191,860
1970	320,138	22,394	3,285	345,817	-	-	-	907	346,724
1971	282,461	6,112	50	288,263	-	-	-	1,061	289,684
1972	250,945	33,805	1,840	286,590	-	-	-	1,254	287,844
1973	395,427	109,041	463	504,931	-	-	-	13,003	517,934
1974	641,052	125,821	2,157	769,030	38,914	28,013	40,187	107,114	876,144
1975	583,715	151,610	5,590	740,915	178,721	40,344	33,333	252,397	993,312
1976	382,216	120,959	14,504	517,679	213,019	6,247	24,564	243,830	761,509
1977	385,972	159,051	19,310	564,333	183,565	26,848	22,951	233,264	797,697
1978	523,557	277,086	38,728	839,731	375,617	25,907	47,934	449,458	1,288,829
1979	491,475	270,979	69,395	831,849	222,653	57,282	54,196	334,131	1,165,980
1980	497,853	394,412	58,090	950,355	304,370	42,802	58,357	405,529	1,355,884
1981	675,463	506,341	73,682	1,255,486	262,983	95,929	63,473	422,386	1,677,871
1982	346,862	278,939	9,901	635,702	158,989	13,912	30,598	203,499	839,201

Appendix Table 14. Comparative commercial summer chum salmon catch data, districts 334-10 and 334-20, Yukon area, 1967-1982.

	District 334-10					District 334-20				
Year	Duration	Days Fished	Boat Hours	Catch	(Catch/Boat Hour)	Duration	Days Fished	Boat Hours	Catch	(Catch/Boat Hour)
1967	6/8-6/27	11.0	77,208	9,494	(0.12)	-	-	-	-	-
1968	6/6-7/3	14.0	91,380	12,995	(0.13)	6/13-7/2	10.5	27,600	1,407	(0.05)
1969	6/2-6/28	12.5	84,864	8,840	(0.10)	6/15-7/1	8.0	16,620	5,024	(0.30)
1970	6/11-7/3	10.5	58,056	87,169	(1.50)	6/14-7/3	9.0	15,756	17,536	(1.11)
1971	6/14-7/3	10.5	73,032	36,077	(0.49)	6/20-7/5	8.5	17,832	6,112	(0.34)
1972	6/8-7/1	12.5	79,236	69,658	(0.88)	6/15-7/1	8.5	19,296	9,040	(0.47)
1973 1/	6/7-7/11	14.5	100,284	191,840	(1.91)	6/10-7/14	14.5	36,000	56,481	(1.57)
1974	6/3-7/13	16.5	114,624	461,025	(4.02)	6/5-7/16	15.5	35,316	72,281	(2.05)
1975	6/9-7/16	15.0	86,304	394,447	(4.72)	6/22-7/18	10.5	21,024	99,944	(4.75)
1976	6/14-7/14	12.0	90,658	272,493	(3.00)	6/20-7/16	11.0	32,624	99,407	(3.05)
1977	6/13-7/12	12.0	63,036	232,427	(3.69)	6/19-7/15	10.0	27,048	102,759	(3.80)
1978	6/8-7/15	13.5	100,008	395,610	(3.96)	6/8-7/14	13.5	44,376	218,196	(4.92)
1979	6/4-7/14	13.5	106,680	382,069	(3.57)	6/3-7/13	13.5	44,748	174,901	(3.91)
1980	6/9-7/15	12.8	89,412	391,024	(4.37)	6/8-7/17	12.5	48,060	310,351	(6.46)
1981	6/6-7/14	12.0	94,656	507,629	(5.36)	6/7-7/16	12.0	46,560	351,458	(7.54)
1982	6/14-7/13	9.5	81,240	248,950	(3.07)	6/16-7/16	10.0	37,920	180,321	(4.76)

1/ 6 inch maximum mesh size regulation during late June-early July became effective in 1973.

Appendix Table 15. Comparative commercial coho and chum salmon catch data for the fall season, district 334-10, Yukon area, 1961-1982.

Year	Dates	Days 1/ Fished	Boat Hours	Commercial catch (catch/boat hour) Coho	Chum
1961	8/1-8/31	16	14,772	2,855 (0.2)	42,461 (2.9)
1962	8/1-9/3	21	46,950	22,926 (0.5)	53,116 (1.1)
1963	8/9-9/6	18	2,100	5,572 (2.7)	no purchases
1964	8/3-8/27	17	8,346	2,446 (0.3)	8,347 (1.0)
1965	8/2-8/4	2/	2/	350 (2/)	22,936 (2/)
1966	7/25-9/10	28	41,994	19,254 (0.5)	69,836 (1.7)
1967	7/24-8/27	21	19,272	9,925 (0.5)	36,451 (1.9)
1968	7/22-8/28	22	47,232	13,153 (0.3)	49,857 (1.1)
1969	7/21-8/23	20	39,408	14,041 (0.4)	128,866 (3.3)
1970	7/20-8/26	22	56,160	12,245 (0.2)	200,306 (3.6)
1971	7/22-8/28	22	85,344	11,582 (0.1)	178,744 (2.1)
1972	7/20-8/26	22	81,726	19,655 (0.2)	134,752 (1.6)
1973	7/19-8/25	22	107,136	34,860 (0.3)	173,783 (1.6)
1974	7/18-8/14	12	41,868	13,758 (0.2)	137,235 (3.3)
1975	7/21-8/16	12	52,128	2,240 (0.04)	158,183 (3.0)
1976	7/19-8/13	11	55,026	4,084 (0.07)	91,091 (1.7)
1977	7/18-8/23	11	50,568	30,588 (0.6)	129,486 (2.6)
1978	7/17-8/29	13	56,184	16,262 (0.2)	127,947 (2.3)
1979	7/19-8/14	8	47,352	11,231 (0.2)	101,400 (2.1)
1980	7/17-8/19	7	24,216	4,819 (0.2)	106,829 (4.4)
1981	7/16-8/17	7	35,520	11,174 (0.3)	167,834 (4.7)
1982	7/19-8/13	8	40,944	15,114 (0.4)	91,271 (2.2)

1/ One "day" is equivalent to 24 hours during open fishing period.
2/ Information not avilable.

Appendix Table 16. Comparative fall chum salmon commercial catch data by date, fall season, district 334-10, Yukon area, 1961-1982.

Cumulative Catch 1/ (Cumulative catch/boat hour)

Date	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981 2/	1982
7/18		16.1 (1.86)			16.4 (1.26)					6.3 (1.70)		4.2 (1.55)		
7/19	3.8 (1.10)			18.6 (1.91)					21.4 (3.72)					
7/20						12.1 (1.57)					6.0 (1.35)			4.3 (0.90)
7/21			8.2 (1.05)		53.6 (2.03)			6.9 (0.73)		11.4 (1.36)			6.0 (1.3)	
7/22		29.6 (1.67)		45.8 (2.23)					23.4 (2.54)			10.8 (1.97)		
7/23	29.7 (3.75)						12.9 (1.51)							32.1 (2.79)
7/24			31.9 (1.71)			24.7 (1.76)		9.7 (0.60)			13.2 (1.31)		7.3 (1.18)	
7/25		30.4 (1.54)			67.4 (1.91)					64.2 (4.14)		21.2 (2.24)		
7/26	44.5 (3.48)			54.8 (1.88)			37.0 (2.33)		33.1 (2.38)					
7/27						59.0 (2.81)					28.0 (1.66)			36.1 (2.31)
7/28			37.6 (1.38)		112.8 (2.28)			16.7 (0.69)		67.0 (3.34)			64.6 (4.93)	
7/29		81.6 (2.95)		63.7 (1.72)					40.8 (2.16)			36.5 (3.07)		
7/30	57.0 (3.24)						55.9 (2.54)							47.8 (2.32)
7/31			53.5 (1.48)			86.9 (3.16)		79.5 (2.24)			37.7 (1.62)	37.9 (2.94)	87.8 (4.58)	
8/1		126.8 (3.57)			122.9 (2.01)					81.4 (3.05)				
8/2	71.8 (3.20)			70.5 (1.62)			86.9 (2.80)		41.7 (1.91)					
8/3						91.8 (2.86)					55.2 (1.82)			
8/4			89.6 (1.94)		127.9 (1.84)			87.3 (1.98)		81.8 (2.89)				55.7 (2.16)
8/5		159.4 (3.67)		73.6 (1.46)					44.9 (1.76)			44.1 (3.16)		
8/6	94.2 (3.45)						112.4 (2.87)							56.9 (1.98)
8/7			104.3 (1.89)			93.0 (2.73)		87.7 (1.85)			93.0 (2.44)	57.6 (3.62)		
8/8		188.4 (3.67)			133.9 (1.72)					83.2 (2.68)				
8/9	108.6 (3.39)			108.6 (1.85)			134.2 (2.90)		94.9 (3.06)					
8/10						94.7 (2.57)					94.3 (2.27)			70.6 (2.06)
8/11			110.2 (1.74)		164.6 (1.84)			88.4 (1.69)		84.8 (2.53)		62.8 (3.61)		
8/12		189.9 (3.47)		123.5 (1.86)					96.4 (2.76)					91.3 (2.53)
8/13	112.5 (3.21)						134.6 (2.78)	91.0 (1.65)					131.6 (5.22)	
8/14			148.3 (2.07)			137.4 (3.31)					101.4 (2.14)	64.6 (3.48)		
8/15		192.2 (3.35)			170.7 (1.77)					86.2 (2.30)				
8/16	120.7 (3.18)			125.1 (1.65)			158.2 (3.04)		113.0 (2.79)					
8/17														
8/18			153.2 (1.95)		177.5 (1.70)					96.4 (2.29)			135.5 (4.64)	
8/19		209.1 (3.45)		146.3 (1.77)								106.8 (4.41)		
8/20	130.4 (3.18)								120.0 (2.65)					
8/21			177.4 (2.10)											
8/22		214.5 (3.39)			185.3 (1.64)					118.3 (2.44)				
8/23	132.6 (3.09)			150.5 (1.79)					125.8 (2.55)					
8/24														
8/25			185.5 (2.05)		187.5 (1.57)					122.7 (2.29)				
8/26		216.4 (3.34)		153.3 (1.76)										
8/27														
8/28			187.0 (2.01)											
8/29					189.3 (1.54)					127.9 (2.28)				
8/30				154.6 (1.60)										
8/31														

1/ Cumulative catch in thousands of fish by period beginning July 18. Fall chum salmon run usually well underway in the lower Yukon River by this date.
2/ Season closed 8/1 - 8/12.

Appendix Table 17. Commercial salmon pack by species and type of processing, Yukon area, 1960-1982. 1/

	Cases (48#)			Fresh-Frozen (round wt. in lbs.)			Cured king Salmon		Cured Chum Salmon		Salmon Roe (lbs.)
	King	Coho	Chum	King	Coho	Chum	Tierces	1/2 Tierce	Tierces	1/2 Tierce	
1960	13,000			2/	2/	2/	250	180			
1961	19,474			2/	2/	2/	504	146			
1962	15,959	512	1,760	2/	2/	2/	464	280			
1963	16,400	1,190		2/	2/	2/	2/	2/			
1964	12,041			2/	17,000	66,770	537	499			
1965	18,149			275,000	2,500	160,500	670	67			
1966	14,026	836	2,812	414,000	61,355	301,240	398	60			
1967	21,503		126	475,900	66,400	366,496	627	96			1,755
1968	19,499		816	561,690	93,154	454,409	351	170			21,000
1969	9,560	1,104	4,499	423,597	26,973 3/	829,586 3/	647	95	15		29,000
1970	6,431	1,002	6,413	716,600	12,900	1,725,000	447	191	51		26,300
1971	6,500	502	3,213	1,058,034	45,836	1,432,455	659	229	139		55,177
1972	7,418	1,005	6,249	1,002,395	83,960	1,495,922	497	147			85,278
1973	5,227	1,008	9,902	1,339,317	181,928	2,929,532	61	133		72	137,594
1974	6,660	603	21,074	1,062,666	58,816	3,879,300	381	56	57		208,842
1975	5,297	40	14,226	781,902	13,299	4,751,941	80	53	45	119	201,404
1976	3,921	80	11,375	1,398,779	29,778	4,256,679	93	92	72	10	226,893
1977	4,642	415	9,428	1,513,484	270,241	4,877,918	180	237	26	-	210,568
1978	5,711	74	9,340	1,473,354	168,241	8,639,156	222	117	7	75	261,422
1979	6,277	22	7,854	2,014,156	108,011	8,098,075	112	91	-	2	410,540
1980	8,764	130	15,783	3,341,262	56,295	8,781,062	29	18	-	37	579,927
1981	1,107	378	11,573	3,686,238	130,097	11,398,680	25	13	9	28	507,550
1982	-	7	751	2,790,456	246,500	4,992,877	-	19	-	1	584,053

1/ Pack represents type of processing when fish were shipped out of district.
2/ Information not available.
3/ Includes approximately 11,600 and 110,500 (round weight) of coho and chum salmon respectively, as salted fish for Japanese market.

Appendix Table 18. Commercial salmon roe sales by statistical area, upper Yukon area, 1978-1982. [1] Figures in parentheses represent catch during the fall season.

	334-41		334-42		334-43		Total 334-40	
	king[2]	chum[3]	king[2]	chum[3]	king[2]	chum[3]	king[2]	chum[3]
1978	0	16,920	330	1,721 (1721)	0	0 (0)	330	18,641 (0)
1979	0	35,117	0	3,399 (3199)	0	0 (0)	0	38,516 (3199)
1980	0	119,957	0	16,174 (1789)	0	4,040 (2558)	0	140,171 (4347)
1981	0	160,757	0	24,988 (1311)	0	2,598 (0)	0	188,343 (1311)
1982	0	137,611	0	12,570 (20)	0	1,267 (147)	0	151,488 (167)

	334-51		334-52		334-53		334-54		Total 334-50	
	king[2]	chum[3]	king[2]	chum[3]	king[2]	chum[3]	king[2]	chum[3]	king[2]	chum[3]
1978	1,046	4,551 (3946)	25	1,274 (1274)	0	0 (0)	0	0 (0)	1,071	5,826 (5220)
1979	0	9,106 (8097)	0	0 (0)	0	0 (0)	0	0 (0)	0	9,106 (8097)
1980	1,317	605 (605)	211	0 (0)	0	0 (0)	0	0 (0)	1,528	605 (605)
1981	0	178 (178)	33	6,809 (6760)	221	17 (17)	0	0 (0)	254	7,004 (6955)
1982	0	21 (0)	0	23 (23)	0	19 (19)	0	0 (0)	0	42 (42)

	334-61		334-62		334-63		Total 334-60	
	king[2]	chum[3]	king[2]	chum[3]	king[2]	chum[3]	king[2]	chum[3]
1978	238	3,294 (1826)	0	7,796 (1680)	4	833 (181)	242	11,923 (3687)
1979	Data not available						0	11,061 (7170)
1980	0	0 (0)	207	2,325 (53)	214	1,025 (15)	421	3,350 (68)
1981	0	0 (0)	395	3,709 (2784)	184	1,297 (235)	579	5,006 (3019)
1982	0	0 (0)	0	1,623 (596)	0	490 (0)	0	2,113 (596)

1 All figures are pounds of unprocessed roe.
2 May include small amounts of chum roe.
3 May include small amounts of king roe except during fall seasons.

Appendix Table 19. Dollar value estimates of Yukon area commercial fishery, 1961-1982. 1/

Year	Gross value of catch to fishermen				Wages Earned 2/	Total Income To Area	Wholesale Value Of Pack 3/	Tax Revenues To State 4/
	King	Coho	Chum	Total				
1961	420,900	1,400	14,700	437,000			1,292,300	37,500
1962	330,300	11,500	20,100	361,900			1,275,250	50,400
1963	409,500	2,800	-	412,300			1,500,400	42,000
1964	351,000	1,200	2,200	354,400			1,203,800	35,000
1965	531,400	200	10,700	542,300			1,412,700	42,000
1966	419,900	9,600	25,000	454,500			1,308,100	37,000
1967	583,700	5,500	17,200	606,400	250,000	856,400	1,864,800	41,700
1968	494,300	6,700	34,000	535,000	264,000	799,000	1,655,200	47,000
1969	415,000	8,200	96,000	519,200	234,000	753,000	1,976,200	40,000
1970	401,300	10,300	211,500	623,100	185,800	808,900	2,113,100	45,000
1971	590,100	10,000	182,900	783,000	357,700	1,140,700	2,106,600	42,000
1972	547,800	20,400	215,800	784,000	445,400	1,229,400	2,405,200	45,300
1973	561,400	46,500	609,100	1,217,000	585,800	1,802,900	4,453,900	62,800
1974	881,300	28,400	1,011,300	1,921,000	500,100	2,421,100	6,035,900	84,100
1975	589,000	3,500	1,201,400	1,793,900	596,600	2,390,500	4,939,700	87,100
1976	983,500	8,600	1,158,900	2,151,000	687,600	2,838,600	6,815,500	96,900
1977	1,928,400	143,000	1,997,300	4,068,700	850,000	4,918,700	10,499,400	151,000
1978	2,133,700	79,200	3,101,800	5,314,700	1,085,700	6,400,400	14,194,800	179,400
1979	3,008,000	84,400	4,527,100	7,619,500	1,210,000	8,829,500	19,048,800	248,600
1980	3,639,300	21,800	2,676,800	6,703,100 5/	1,475,000	8,178,100	16,757,700	205,400
1981	4,635,500	91,900	5,323,300	10,050,700 6/	1,616,000	11,666,700	26,267,500	322,500
1982	3,871,300	153,700	2,693,800	6,718,800 7/	1,500,000	8,218,800	16,797,000	222,000

1/ Information not available for wages earned during 1961-1966.
2/ Includes wages paid to tender boat operators and resident processing plant employees in district.
3/ Based on type of processing when fish were shipped out of the district.
4/ Processors tax and vessel and crewmember license fees. Does not include CFEC permit fee.
5/ Includes $365,200 in roe sales upper Yukon area.
6/ Includes $601,100 in roe sales upper Yukon area.
7/Includes $422,500 in roe sales upper Yukon area.

Appendix Table 20. Estimated average prices paid to fishermen, Yukon area, 1961-1982.

PRICE PER FISH

Year	Lower Yukon Area				Upper Yukon Area			
	King	Summer Chum	Fall Chum	Coho	King	Summer Chum	Fall Chum	Coho
1961	$3.50							
1962	3.50							
1963	3.50							
1964	3.75		.25	.50				
1965	4.50		.35					
1966	4.50		.35	.50				
1967	4.50	.35	.35	.50				
1968	4.64	.50	.50	.50				
1969	4.60	.50	.50	.55				
1970	5.00	.61	.61	.84				
1971	5.34	.64	.64	.82				
1972	5.90	.75	.75	.92				
1973	7.45	1.18	1.18	1.27				
1974	9.00	1.36	1.58	1.75	8.67	1.00	1.00	1.00
1975	9.24	1.30	1.50	1.51	16.25	1.12	1.12	1.12
1976	11.17	1.56	1.80	1.78	12.96	1.22	1.22	1.22
1977	20.32	2.80	3.60	3.75	24.17	1.75	1.75	1.75
1978	21.60	3.20	3.62	4.20	15.38	1.54	1.97	1.97
1979	22.74	3.87	5.05	5.87	20.20	1.65	2.24	2.24
1980	23.41	1.38	1.93	2.32	13.60	1.52	2.08	1.89
1981	29.76	3.00	4.40	4.08	23.70	1.42	2.59	2.00
1982	32.43	2.80	4.27	4.59	21.83	1.28	2.10	2.41

PRICE PER POUND

Year	Lower Yukon Area				Upper Yukon Area			
	King	Summer Chum	Fall Chum	Coho	King	Summer Chum	Fall Chum	Coho
1964	.17		.03					
1965	.20							
1966	.20							
1967	.19	.05	.05	.07				
1968	.18	.06	.06					
1969	.19	.08	.08	.08				
1970	.22	.09	.09	.12				
1971	.24	.10	.10	.12				
1972	.24	.11	.11	.13				
1973	.30	.16	.16	.18				
1974	.38	.21	.21	.25	.50	.15	.13	.15
1975	.42	.20	.20	.21	.92	.17	.14	.17
1976	.51	.24	.24	.27	.74	.19	.16	.19
1977	.85	.40	.45	.50	1.37	.27	.22	.27
1978	.90	.45	.47	.60	.87	.24	.25	.24
1979	1.09	.52	.68	.80	1.00	.25	.29	.25
1980	1.04	.20	.28	.36	.85	.23	.27	.29
1981	1.20	.40	.55	.60	1.00	.20	.35	.35
1982	1.41	.40	.55	.69	1.02	.18	.28	.37

Appendix Table 21. Average weight of salmon, commercial catch, Yukon area, area, 1964-1982.

	AVERAGE WEIGHT IN POUNDS 1/								
	Lower Yukon Area				Upper Yukon Area				
Year	King	Summer Chum	Fall Chum	Coho	Year	King	Summer Chum	Fall Chum	Coho
1964	22.6	-	-	-					
1965	23.0	-	-	-					
1966	23.0	-	-	-					
1967	24.0	-	-	7.3					
1968	26.5	-	-	-					
1969	23.9	-	-	6.7					
1970	22.3	-	-	7.1					
1971	22.6	-	-	6.9					
1972	24.6	6.6	7.6	7.1					
1973	24.5	6.8	7.9	7.1					
1974	23.7	6.5	7.5	7.0	1974	17.3	6.7	7.7	6.7
1975	22.0	6.5	7.5	7.2	1975	17.7	6.6	8.0	6.6
1976	21.9	6.5	7.5	6.6	1976	18.4	6.4	8.0	7.5
1977	23.9	7.0	8.0	7.5	1977	17.6	6.5	8.0	6.5
1978	24.0	7.1	7.7	7.0	1978	20.2	6.8	7.4	6.4
1979	20.9	7.4	7.4	7.3	1979	20.2	6.6	7.7	6.5
1980	22.5	6.9	6.9	6.4	1980	16.0	6.6	7.7	6.5
1981	24.8	7.5	8.0	6.8	1981	23.7	7.1	7.4	5.7
1982	23.0	7.1	7.7	6.7	1982	21.4	7.1	7.5	6.5

1/ Information not available for some species. Data obtained from age-length-weight samples or fish ticket entries.

Appendix Table 22. Yukon River comparative subsistence catch and effort data,1961-1982 (numbers per fishing family are in parenthesis).

Year	Total Catch		Equivalent Catch 1/		Mean Equivalent Catch Per Family 1/	
	King Salmon	Other 2/ Salmon	King Salmon	Other 2/ Salmon	King Salmon	Other 2/ Salmon
1961	31,864	405,632	20,117	403,765	32	647
1962	21,610	356,754	10,217	325,244	18	577
1963	32,790	408,381	23,919	376,440	40	625
1964	22,877	485,630	14,847	458,609	25	762
1965	19,723	458,379	16,499	430,949	30	788
1966	14,272	214,236	11,507	204,913	23	416
1967	19,661	288,595	16,306	256,956	35	546
1968	15,066	189,607	11,883	170,552	25	358
1969	15,000	213,725	13,916	195,476	30	426
1970	15,794	223,237	13,474	199,613	34	498
1971	27,953	228,849	24,058	191,011	48	383
1972	21,868	151,008	19,314	129,343	46	311
1973	26,459	219,275	23,530	198,054	44	374
1974	23,137	323,834	19,014	284,977	38	580
1975	15,466	300,379	12,600	262,741	21	448
1976	19,329	262,624	16,196	235,056	25	358
1977	20,388	267,127	15,740	235,401	27	408
1978	30,297	299,791	25,496	255,447	36	360
1979	35,205	452,328	26,616	315,681	33	387
1980	58,224	479,713	38,749	436,321	51	571
1981	38,354	425,366	24,070	332,512	35	485
1982	36,385	433,219	23,880	407,099	32	542

Year	Fishing Familes Surveyed 1/	People in Fishing Families 1/	Snow-machines 1/	Sled Dogs 1/	Gear Operated 1/ Gillnets	Fishwheels
1961	624	3,626 (5.8)		4,806 (7.7)	577	169
1962	564	3,279 (5.8)		3,848 (6.8)	613	138
1963	602	4,154 (6.9)		4,214 (7.0)	716	156
1964	602	3,612 (6.0)		4,003 (6.6)	840	155
1965	547	3,993 (7.3)		3,993 (7.3)	645	127
1966	492	3,149 (6.4)		3,112 (6.3)	582	116
1967	471	2,779 (5.9)	192 (0.4)	2,752 (5.8)	530	86
1968	476	3,094 (6.5)	262 (0.6)	2,719 (5.7)	565	71
1969	459	2,984 (6.5)	349 (0.8)	2,448 (5.3)	930	63
1970	400	2,680 (6.7)	346 (0.9)	2,214 (5.5)	647	55
1971	499	3,244 (6.5)	460 (0.9)	2,226 (4.5)	795	63
1972	416	2,621 (6.3)	438 (1.0)	1,589 (3.8)	755	59
1973	530	3,339 (6.3)	571 (1.1)	2,375 (4.5)	991	83
1974	491	3,093 (6.3)	534 (1.1)	2,105 (4.3)	668	90
1975	587	3,698 (6.3)	762 (1.3)	2,585 (4.4)	1,119	126
1976	657	4,139 (6.3)	882 (1.3)	3,401 (5.2)	1,071	154
1977	577	3,635 (7.3)	785 (1.4)	3,413 (5.9)	755	164
1978	711	3,929 (5.5)	843 (1.2)	3,722 (5.2)	943	178
1979	815	4,386 (5.3)	914 (1.1)	4,623 (5.7)	1,324	179
1980	764	4,101 (5.4)	891 (1.2)	4,874 (6.4)	939	179
1981	685	4,314 (6.3)	812 (1.2)	4,663 (6.8)	-	173
1982	751	3,936 (5.2)	840 (1.1)	4,513 (6.0)	1,186	141

1/ Data from villages surveyed each year since 1961: mouth to Fort Yukon and Tanana River (does not include Fairbanks or Shageluk).
2/ Mostly chum salmon, some pinks and cohos.

Appendix Table 23. Comparative Yukon River king salmon subsistence catches by village, 1961-1982.

Village	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
Mouth to Anuk River											
Sheldons Point	180	116 1/	921 1/	52	49	127	755	30	728	1,093	882
Alakanuk	165	53	81	87	177	263	287	205	852	589	1,116
Emmonak-Kwiguk	137	21	120	63	145	160	541	42	810	151	627
Aproka Pass & vicinity	179	181	293	73	281	645	959	147	238	23	42
Kotlik-Hamilton	111	35	195	53	131	47	162	53	551	394	328
Subtotal	772	406	1,610	328	783	1,242	2,704	477	3,179	2,250	2,995
Anuk River to Owl Slough											
Mountain Village	1,110	619	2,427	985	510	217	1,345	238	557	348	2,036
Pitkas Point-St. Marys	1,810	391	1,254	521	826	499	993	168	737	575	1,915
Pilot Station	753	219	801	237	502	440	1,534	784	367	647	1,400
Marshall	1,265	503	2,012	290	942	350	306	365	564	598	985
Subtotal	4,938	1,732	6,494	2,093	2,780	1,506	4,178	1,555	2,225	2,168	6,336
Owl Slough to Bonasila R.											
Russian Mission	1,563	641	1,392	1,185	1,393	800	2,019	2,170	707	993	839
Holy Cross	2,648	1,111	3,123	2,243	2,351	2,645	2,876	1,418	1,877	1,678	3,032
Subtotal	4,211	1,752	4,515	3,428	3,744	3,445	4,895	3,588	2,584	2,671	3,871
Bonasila R. to Illinois Cr.											
Anvik	22	51	163	153	118	144	54	114	71	67	152
Grayling	25 2/	37 2/	197 2/	124	246	85	199	208	187	155	416
Kaltag	33	224	102	330	57	47	199	60	232	124	154
Nulato	513	171	835	355	305	218	678	209	771	734	470
Koyukuk	483	423	629	209	228	93	262	398	357	30	410
Galena	626	123	282	158	260	407	210	456	263	313	574
Ruby-Kokrines	1,060	226	1,514	2,555	1,843	887	820	881	1,619	1,313	2,465
Subtotal	2,762	1,255	3,722	3,884	3,057	1,881	2,322	2,236	3,500	2,736	4,461
Illinois Cr. to U.S. Can.Border											
Tanana	2,379	332	1,414	329	524	421	151	627	683	361	428
Rampart	605	1,438	1,231	990	1,041	869	368	922	321	150	1,190
Stevens Village	650	831	1,073	325	910	620	534	787	350	851	750
Beaver	185	442	491	710	480	31	210	495	458	773	777
Fort Yukon	2,958	1,822	2,831	2,098	2,747	1,074	692	632	75	1,019	706
Circle	496	393	250	1,200	-	-	-	-	-	-	666
Eagle	875	400	500	17	100	-	-	-	-	-	111
Subtotal	8,148	5,658	7,790	5,669	5,802	3,015	1,955	3,463	1,887	3,154	4,628

Appendix Table 23. (Continued)

Village	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
Innoko River											
Shageluk	-	-	-	-	-	-	-	-	-	-	-
Holikachuk	-	-	-	-	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-	-	-	-	-
Koyukuk River											
Huslia	-	100	32	112	9	-	7	35	16	12	5
Hughes	-	-	47	18	-	-	65	82	10	116	378
Alatna	-	-	-	-	-	-	-	1	8	2	0
Allakaket	-	-	85	-	-	-	70	3	15	128	268
Subtotal	-	100	164	130	9	-	142	121	49	258	651
Tanana River											
Minto-Manley Hot Spr.	347	92	325	468	276	146	-	12	76	138	7
Nenana	310	115	213	194	157	272	252	462	465	357	2,357
Fairbanks	-	-	-	-	-	-	-	-	-	132	98
Subtotal	657	207	538	662	433	418	252	474	541	627	2,462
Chandalar River											
Venetie	-	-	-	-	-	-	-	-	7	10	-
Subtotal	-	-	-	-	-	-	-	-	7	10	-
Porcupine River											
Canyon Village	-	-	17	35	-	-	-	-	-	-	-
Chalkysi & Kevinjik R. Fish Camp	-	-	2	2	-	-	-	-	-	-	-
Old Crow, Y.T.	-	-	44	-	94	65	43	28	27	8	9
Subtotal	-	-	63	37	94	65	43	28	27	8	9
Yukon Terr.Villages 5/											
Dawson	2,231	2,000	1,500	3,476	351	50	50	100	-	40	-
Stewart River	-	-	-	-	-	-	-	100	-	30	-
Mayo-Stewart Crossing	-	300	250	150	400	100	30	-	-	-	250
Fraser Falls	-	-	-	-	-	-	-	-	-	-	-
Burwash-Kluane R.	-	-	-	-	-	-	-	-	-	-	-
Fort Selkirk	-	-	-	-	100	125	400	200	22	11	-
Pelly	-	2,000 4/	2,000 4/	1,000	300	350	600	600	200	450	450
Faro	-	-	-	-	-	-	-	-	-	-	-
Ross River	-	500	600	-	500	120	150	200	-	120	-
Minto	-	-	-	600	170	350	-	100	-	-	-
Tatchun Creek	-	-	-	-	150	-	250	100	100	60	-
Carmacks	-	3,000	2,500	700	600	1,050	1,450	1,200	450	700	1,400
Lake Laberge-Whitehorse	-	-	-	-	-	-	-	-	-	20	180
Takhini	-	-	-	-	-	-	40	-	-	-	-
McClintock R.	-	-	-	-	-	-	-	-	-	8	-
Carcross	-	-	-	-	-	-	-	-	-	-	-
Teslin-Johnson's Crossing	-	1,000	900	720	450	300	200	200	175	605	80
Subtotal	10,376	10,500	7,750	6,646	3,021	2,635	3,170	2,872	973	2,092	2,791
Total	31,684	21,610	32,970	22,877	19,723	14,272	19,661	15,006	15,000	15,974	28,384

Appendix Table 23. (Continued)

Village	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Mouth to Anuk River											
Sheldons Point	462	165	283	108	122	302	546	91	427	163	79
Alakanuk	647	461	569	130	363	213	1,125	893	1,595	423	336
Emmonak-Kwiguk	300	1,071	208	55	398	62	2,738	1,362	1,175	1,021	1,328
Aproka Pass & vicinity	37	106	5	0	–	–	64	–	–	675	568
Kotlik-Hamilton	342	1,008	394	204	472	173	773	533	472	–	–
Subtotal	1,788	2,811	1,459	497	1,355	750	5,246	2,879	3,669	2,282	2,311
Anuk River to Owl Slough											
Mountain Village	932	912	460	394	397	172	817	1,025	843	811	218
Pitkas Point-St. Marys	1,517	1,270	878	438	1,273	576	1,314	1,718	1,297	1,380	985
Pilot Station	1,558	1,508	517	107	502	556	1,027	804	433	399	428
Marshall	713	1,163	1,068	436	694	364	806	721	1,101	990	478
Subtotal	4,720	4,853	2,923	1,375	2,866	1,668	3,964	4,268	3,674	3,580	2,109
Owl Slough to Bonasila R.											
Russian Mission	975	1,387	1,243	2,098	1,328	639	1,498	1,476	1,660	1,689	1,628
Holy Cross	2,359	3,708	2,243	2,792	1,492	1,920	2,404	1,787	3,123	2,312	1,731
Subtotal	3,334	5,095	3,486	4,890	2,820	2,559	3,902	3,263	4,783	4,001	3,359
Bonasila R. to Illinois Cr.											
Anvik	72	67	111	83	84	67	180	261	161	191	354
Grayling	185	516	547	100	117 2/	149	292	391	3,664	222	294
Kaltag	83	148	616	192	57	216	127	435	694	179	344
Nulato	364	307	1,161	1,119	968	1,531	1,354	1,245	2,297	1,117	811
Koyukuk	417	564	604	50	437	752	518	495	699	541	493
Galena	608	510	706	1,294	435	1,155	945	1,591	1,205	570	735
Ruby-Kokrines	2,076	2,418	2,899	912	1,959	735	1,539	2,221	1,736	964	1,168
Subtotal	3,805	4,530	6,644	3,750	4,057	4,605	4,955	6,639	10,456	3,784	4,199
Illinois Cr. to U.S. Can.Border											
Tanana	1,461	965	789	80	1,338	858	1,851	1,604	5,711	2,517	2,230
Rampart	1,457	2,614	452	517	581	1,194	987	1,820	1,169	488	887
Stevens Village	1,002 3/7/	1,027 3/	590	362	643 7/	1,252 7/	3,178	2,194 7/	3,962 7/	2,387 7/	3,745
Beaver	241	358	34	168	188	299	558	394	506	552	250
Fort Yukon	520	536	1,030	215	1,158	1,061	2,642	1,922	2,527	2,794	1,894
Circle	345	225	406	16	528	304	212	1,175	769	728	969
Eagle	353	421	66	20	633	1,171	963	2,888	2,880	3,782	2,864
Subtotal	5,379	6,146	3,367	1,377	5,069	6,129	10,391	11,997	17,524	13,248	12,839

Appendix Table 23. (Continued)

Village	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Innoko River											
Shageluk	-	-	-	-	11	-	-	62	35	10	-
Holikachuk	-	-	-	-	-	-	-	-	-	-	-
Subtotal	-	-	-	-	11	-	-	62	35	10	-
Koyukuk River											
Huslia	1	35	69	23	21	50	132	146	154	61	125
Hughes	27	32	10	25	155	72	216	180	226	402	479
Alatna	3	1	17	0	0	1	7	2	20	0	6
Allakaket	25	73	138	151	231	172	239	236	197	185	268
Subtotal	56	141	234	199	407	295	594	564	597	648	878
Tanana River											
Minto-Manley Hot Spr.	99	58	176	213	326	752	298	269	764	711	797
Nenana	887	683	1,431	533	864	742	807	800	771	974	1,195
Fairbanks	190	26	38	32	31	67	126	264	291	400	451
Subtotal	1,176	767	1,645	778	1,221	1,561	1,231	1,333	1,826	2,085	2,443
Chandalar River											
Venetie	-	-	-	-	-	-	9	0	160	52	20
Subtotal	-	-	-	-	-	-	9	0	160	52	20
Porcupine River											
Canyon Village	-	-	-	-	-	-	-	-	-	-	-
Chalkysi & Kevinjik R. Fish Camp	-	-	-	-	-	-	-	-	-	-	-
Old Crow, Y.T.	-	20	100	100	23	29	-	0	2,000	100	-
Subtotal	-	20	100	100	23	29	-	0	2,000	100	-
Yukon Terr.Villages 5/											
Dawson	-	-	-	-	500	531	421	1,200	13,500	1,016	20
Stewart River	100	99	-	-	-	-	-	-	-	1,000	62
Mayo-Stewart Crossing	-	25	233	-	-	61	105	-	-	-	720
Fraser Falls	-	25	-	-	-	-	-	-	-	-	-
Burwash-Kluane R.	-	-	-	-	-	-	-	-	-	-	0
Fort Selkirk	-	45	-	-	-	-	-	-	-	-	164
Pelly	380	53	433	-	200	265	500	-	-	-	3,142
Faro	-	75	-	-	-	-	-	-	-	3,286	-
Ross River	35	75	30	-	-	-	-	-	-	-	440
Minto	15	261	-	-	-	-	-	-	-	400	-
Tatchun Creek	-	-	-	-	-	-	-	-	-	-	-
Carmacks	1,080	1,384	2,563	-	800	1,121	1,280	3,000	-	-	3,172
Lake Laberge-Whitehorse	-	-	-	-	-	-	-	-	-	3,042	7
Takhini	-	-	-	-	-	-	-	-	-	-	-
McClintock R.	-	-	-	-	-	-	-	-	-	-	-
Carcross	-	-	-	-	-	-	-	-	-	-	-
Teslin-Johnson's Crossing	-	54	20	-	-	800	600	-	-	-	500
Subtotal	1,647	2,096	3,279	2,900 6/	1,500	2,778	2,906	4,200	13,500	8,844	8,227
Total	21,905	26,459	23,137	15,866	19,329	20,374	30,297	35,205	58,224	38,634	36,385

1/ Includes Black River catch.
2/ Includes Shageluk-Holikachuk fish camp catches.
3/ Includes New Minto fish camp catches.
4/ Includes Minto catches.
5/ Data by village obtained from annual reports. Subtotals includes revised catch data and sumation of village catches may not equal subtotal.
6/ Catch by village not available.
7/ Includes catches made by Fairbanks permit holders who fished in Yukon River near bridge crossing.

Appendix Table 24. Comparative Yukon River chum salmon subsistence catches by village, 1961-1982.

Village	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
Mouth to Anuk River											
Sheldon's Point	12,683	10,899 1/	32,577 1/	8,701	10,884	3,077	2,757	8,693	5,573	4,238	4,355
Alakanuk	8,932	5,747	17,953	11,333	21,473	9,830	9,964	14,184	15,806	10,994	7,895
Emmonak-Kwiguk	15,670	9,074	27,749	16,954	47,386	11,824	15,314	16,569	12,836	7,265	5,087
Aproka Pass & vicinity	8,409	6,071	8,915	7,712	20,129	10,741	7,910	4,853	4,048	565	559
Kotlik-Hamilton	3,931	5,362	9,942	4,076	4,728	3,003	7,251	1,709	6,391	4,878	4,682
Subtotal	49,805	37,153	97,136	48,776	104,600	38,405	43,196	46,008	44,654	27,940	22,578
Anuk R. to Owl Slough											
Mountain Village	7,373	8,331	10,106	13,593	11,475	7,548	8,305	7,312	10,676	4,865	8,214
Pitkas Point-St. Marys	8,771	10,510	7,001	12,508	14,130	8,460	9,790	9,166	11,586	14,604	13,533
Pilot Station	5,605	13,926	5,553	10,776	7,865	5,587	6,520	4,770	7,515	5,882	4,171
Marshall	5,992	6,595	8,023	10,125	6,631	3,640	3,070	3,530	6,606	4,910	6,154
Subtotal	27,741	39,362	30,683	47,002	40,101	25,235	27,685	24,778	36,383	30,261	32,072
Owl Slough to Bonasila R.											
Russian Mission	4,098	9,994	5,354	10,069	4,888	2,707	4,897	3,836	3,668	3,114	2,378
Holy Cross	21,144	20,424	12,532	31,447	25,709	4,228	22,341	10,309	6,037	4,188	2,387
Subtotal	25,242	30,418	17,886	41,516	30,597	6,935	27,238	14,145	9,705	7,302	4,765
Bonasila R. to Illinois Cr.											
Anvik	61,406	43,404	28,064	34,341	37,179	14,239	20,793	10,020	8,925	9,924	8,121
Grayling	56,284 2/	32,737 2/	18,358 2/	23,784	36,436	11,437	22,852	8,225	18,037	12,548	6,900
Kaltag	23,395	25,824	23,193	35,961	29,382	21,729	27,028	12,090	9,942	12,465	10,662
Nulato	63,163	27,948	31,742	62,446	43,988	22,017	22,521	13,242	23,853	26,456	18,369
Koyukuk	13,544	6,282	7,966	36,167	11,232	7,443	4,613	3,541	3,359	3,789	3,125
Galena	10,585	1,673	6,731	3,100	2,741	8,296	2,650	1,079	2,422	3,179	2,015
Ruby-Kokrines	15,654	18,243	15,585	30,122	17,603	5,530	10,690	2,382	5,201	8,068	13,356
Subtotal	244,031	156,111	131,639	225,921	178,561	90,691	111,147	50,579	71,739	76,429	62,548
Illinois Cr. to U.S. Can. Border											
Tanana	12,775	7,245	16,646	15,348	14,885	10,421	11,938	13,406	12,455	23,017	25,273
Rampart	11,722	6,962	11,209	14,963	13,462	4,056	15,763	2,636	8,935	5,252	11,435
Stevens Village	3,490	4,355	8,247	6,979	7,346	1,900	3,145	2,022	2,725	8,292	7,957
Beaver	2,975	2,334	12,119	11,359	3,274	4,135	4,292	3,619	1,965	2,378	1,870
Fort Yukon	13,252	10,255	31,219	19,407	19,402	3,960	8,983	6,564	3,338	6,354	3,498
Circle	992	800	100	2,300	-	-	-	-	-	-	2,940
Eagle	150	100	125	1,582	256	-	-	-	-	-	490
Subtotal	45,356	32,051	79,665	71,938	58,625	24,472	44,121	28,247	29,418	45,293	53,463
Innoko River											
Shageluk	-	3,500	-	-	-	-	-	-	-	-	-
Holikachuk	-	100	-	-	-	-	-	-	-	-	-
Subtotal	-	3,600	-	-	-	-	-	-	-	-	-
Koyukuk River											
Huslia	-	16,000	5,455	13,913	5,101	-	5,489	3,677	2,466	4,018	1,468
Hughes	-	-	767	559	-	-	5,837	2,237	3,112	6,367	16,902
Alatna	-	-	-	-	-	-	170	99	830	1,226	609
Allakaket	-	-	1,972	-	-	-	3,929	1,391	3,254	7,759	8,773
Subtotal	-	16,000	8,194	14,472	5,101	-	15,425	7,404	9,662	19,370	27,752

Appendix Table 24. (Continued)

Village	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
Tanana River											
Minto-Manley Hot Spr.	6,486	17,228	16,493	17,628	11,358	7,152	22	740	330	540	8
Nenana	6,426	13,821	13,599	11,129	7,363	12,023	3,517	6,055	3,247	11,398	19,007
Fairbanks	-	-	-	-	-	-	-	-	-	1,072	5,655
Subtotal	12,912	31,049	29,092	28,757	18,721	19,175	3,539	6,795	3,577	13,010	24,670
Chandalar River											
Venetie	-	1,000	200	-	9,856	1,098	2,626	551	3,116	2,400	801
Subtotal	-	1,000	200	-	9,856	1,098	2,626	551	3,116	2,400	801
Porcupine River											
Canyon Village	-	210	1,566	2,316	1,531	-	-	-	-	-	-
Chalkytsik	-	500	64	742	1,438	-	-	-	-	-	-
Old Crow, Y.T.	-	2,800	20,000	-	7,535	7,175	11,768	10,000	3,411	620	100
Subtotal	-	3,510	21,630	3,058	10,504	7,175	11,768	10,000	3,411	620	100
Yukon Terr. Villages											
Dawson	725	3,000	1,500	3,331	-	50	50	50	-	60	-
Stewart River	-	-	-	-	-	-	-	-	-	-	-
Mayo-Stewart Crossing	-	-	-	-	-	-	-	-	-	-	-
Fraser Falls	-	-	-	-	-	-	-	-	-	-	-
Burwash-Kluane R.	-	-	-	-	-	-	250	200	760	-	100
Fort Selkirk	-	-	-	-	1,000	450	1,000	500	500	500	-
Pelly	-	1,500 4/	1,500 4/	-	100	-	-	50	300	-	-
Faro	-	-	-	-	-	-	-	-	-	-	-
Ross River	-	-	-	-	-	-	-	-	-	-	-
Minto	-	-	-	600	623	450	50	100	100	-	-
Tatchun Creek	-	-	-	-	-	-	-	-	-	-	-
Carmacks	-	2,000	2,500	250	260	100	500	200	400	50	-
Lake Laberge-Whitehorse	-	-	-	-	-	-	-	-	-	-	-
Takhini	-	-	-	-	-	-	-	-	-	-	-
McClintock R.	-	-	-	-	-	-	-	-	-	-	-
Carcross	-	-	-	-	-	-	-	-	-	-	-
Teslin-Johnson's Crossing	-	-	-	-	-	-	-	-	-	2	-
Subtotal	5,800	6,500	5,500	4,181	2,265	1,425	1,832	1,100	2,089	580	13,900
Total	412,889	6/358,441 6/	421,625	485,621	458,931	214,611	288,677	189,607	213,764	223,205	214,368

Appendix Table 24. (Continued)

Village	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Mouth to Anuk River											
Sheldon's Point	4,355	3,554	2,720	6,247	2,033	1,327	3,420	2,177	2,545	3,200	3,541
Alakanuk	5,696	6,551	12,743	3,656	10,866	6,591	9,583	11,252	5,091	7,684	7,874
Emmonak-Kwiguk	4,828	10,135	7,388	5,336	8,397	7,501	9,826	12,634	7,720	10,557	17,679
Aproka Pass & vicinity	344	580	1,460	229	231	25	473	–	–	–	–
Kotlik-Hamilton	3,976	7,639	6,098	6,578	10,289	7,152	9,127	9,053	9,857	9,158	10,566
Subtotal	18,398	27,625	33,936	17,258	31,816	22,596	32,429	35,116	25,213	30,619	39,660
Anuk R. to Owl Slough											
Mountain Village	5,909	7,524	11,661	6,720	8,278	11,368	6,920	13,304	10,548	8,232	9,689
Pitkas Point-St. Marys	11,072	9,201	14,478	8,644	12,060	12,347	10,097	12,275	7,898	9,204	14,574
Pilot Station	7,026	8,474	8,567	7,849	5,498	5,708	4,000	6,489	5,242	5,054	6,347
Marshall	5,174	4,934	6,763	5,710	3,938	2,896	2,562	7,002	7,229	7,234	7,572
Subtotal	29,181	30,133	41,469	28,923	29,774	32,319	23,579	39,070	30,917	29,724	38,182
Owl Slough to Bonasila R.											
Russian Mission	2,919	2,459	4,740	4,113	2,407	2,262	1,256	1,927	880	3,559	2,205
Holy Cross	3,421	3,532	4,611	4,691	1,546	5,404	939	3,474	4,773	4,753	5,969
Subtotal	6,340	5,991	9,351	8,804	3,953	7,666	2,195	5,401	5,653	8,312	8,174
Bonasila R. to Illinois Cr.											
Anvik	3,689	20,850	29,261	30,924	26,660	23,847	16,021	14,950	31,426	29,140	31,233
Grayling	6,428	12,778	27,421	26,476	27,500 2/	17,102	18,824	20,630	32,308	16,898	50,992
Kaltag	4,285	23,135	14,920	11,699	13,106	16,588	19,921	31,424	57,339	30,552	37,999
Nulato	7,648	13,568	37,312	22,552	13,253	12,065	9,056	11,336	31,062	8,295	20,033
Koyukuk	1,772	1,964	14,978	5,667	2,440	3,946	5,268	10,133	17,445	12,630	19,691
Galena	1,353	4,612	8,307	11,500	13,435	5,527	11,945	6,815	16,699	18,564	22,945
Ruby-Kokrines	6,725	12,932	19,235	8,820	10,777	4,349	14,709	16,731	21,017	14,272	15,068
Subtotal	31,900	89,839	151,434	117,638	107,171	83,424	95,124	112,019	207,296	30,351	197,761
Illinois Cr. to U.S. Can. Border											
Tanana	13,108	10,795	12,447	26,342	21,592	19,790	22,683	39,218	38,261	40,066	37,944
Rampart	3,674	8,986	1,527	8,117	14,175	10,056	2,771	25,010	6,101	7,485	5,495
Stevens Village	1,118 3/	6,078 3/	6,728 3/	2,297	1,170 9/	4,926 9/	16,460	12,413 9/	11,685 9/	23,061 /9	19,429/9
Beaver	3,157	1,372	1,583	1,270	517	716	1,717	1,826	458	881	2,412
Fort Yukon	1,597	3,074	142	19,458	1,143	13,630	21,580	22,266	7,828	24,632	3,485
Circle	752	592	1,266	1,283	153	203	859	3,541	1,785	7,228	290
Eagle	587	2,109	66	1,825	1,141	7,432	5,027	27,048	16,773	31,105	15,142
Subtotal	23,933	33,006	23,759	60,592	39,891	56,753	71,097	131,322	82,891	134,458	84,197
Innoko River											
Shageluk	–	–	–	–	1,577	–	–	6,647	2,485	2,671	–
Holikachuk	–	–	–	–	–	–	–	–	–	–	–
Subtotal	–	–	–	–	1,577	–	–	6,647	2,485	2,671	–
Koyukuk River											
Huslia	534	4,482	6,601	5,026	8,791	3,753	8,656	21,255	16,800	12,815	6,928
Hughes	2,777	2,541	8,786	5,429	4,280	4,856	6,555	12,865	13,455	6,849	9,640
Alatna	490	27	3,510	950	650	210	681	104	370	304	438
Allakaket	867	2,465	7,034	5,609	4,215	3,686	9,833	8,505	12,204	8,964	8,289
Subtotal	4,668	9,515	25,931	17,014	17,936	12,505	25,725	43,229	42,829	28,932	25,295

Appendix Table 24. (Continued)

Village	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Tanana River											
Minto-Manley Hot Spr.	6	7	20	6,000	9,400	16,192	15,494	22,213	19,801	19,930	12,128
Nenana	20,864	14,154	26,340	26,634	14,345	24,167	27,625	33,525	37,549	17,901	16,084
Fairbanks	8,608	1,657	2,958	1,615	2,826	725	3,917	6,043	7,849	9,009	7,229
Subtotal	29,478	15,818	29,318	34,249	26,571	41,084	47,036	62,581	65,199	46,480	35,441
Chandalar River											
Venetie	50	410	-	2,401	508	1,660	2,606	3,943	2,730	6,400	850
Subtotal	50	410	-	2,401	508	1,660	2,606	3,943	2,730	6,400	850
Porcupine River											
Canyon Village	-	-	-	-	-	-	-	-	-	-	-
Chalkytsik	-	-	-	-	-	600	-	-	-	-	-
Old Crow, Y.T.	5,000	5,827	7,000	11,600	3,125	5,592	5,000	11,000	7,500	3,000	-
Subtotal	5,000	5,827	7,000	11,600	3,125	6,192	5,000	11,000	7,500	3,000	-
Yukon Terr. Villages											
Dawson	-	-	-	-	-	-	728	2,000	7,000	1,792	-
Stewart River	-	-	-	-	-	-	-	-	-	-	-
Mayo-Stewart Crossing	-	-	-	-	-	-	-	-	-	-	-
Fraser Falls	-	-	-	-	-	-	-	-	-	-	-
Burwash-Kluane R.	-	199	32	-	-	-	-	-	-	-	500
Fort Selkirk	2,000	-	-	-	-	-	-	-	-	-	283
Pelly	-	-	14	-	100	650	-	-	-	1,395	2,000
Faro	-	-	-	-	-	-	132	-	-	-	-
Ross River	-	327	-	-	-	-	-	-	-	-	-
Minto	-	-	-	-	-	-	-	-	-	-	-
Tatchun Creek	-	-	-	-	-	-	-	-	-	-	-
Carmacks	-	487	1,590	-	200	780	350	-	-	642	676
Lake Laberge-Whitehorse	-	-	-	-	-	-	-	-	-	-	-
Takhini	-	-	-	-	-	-	-	-	-	-	-
McClintock R.	-	-	-	-	-	-	-	-	-	-	-
Carcross	-	-	-	-	-	-	-	-	-	-	-
Teslin-Johnson's Crossing	-	-	-	-	-	-	-	-	-	-	-
Subtotal	3,000	1,111	1,636	6,500 8/	300	2,929	1,210	2,000	7,000	3,829	3,459
Total	151,008	219,275	323,834	300,379	262,622	267,127	299,791	452,328	479,713	425,366	433,219

Appendix Table 25. Subsistence salmon catches taken order authority of a permit, upper Yukon area, 1973-1982.

Upper Tanana River (upstream of Wood River) Subsistence Salmon Fishery

Year	No. of permits issued	Permittees Reporting Catches	Kings	Summer Chums	Fall Chum and Coho
1973	22	4	26	771	886
1974	70	1/	38	1,373	1,580
1975	36	1/	32	751	864
1976	110	1/	31	1,314	1,512
1977	89	33	81	118	607
1978	160	126	126	2,729	1,188
1979	246	199	264	2,384	4,459
1980	315	254	282	3,729	4,059
1981	346	228	400	3,239	5,770
1982	330	209	451	2,708	4,521

Upper Tanana River (Big Delta area) Subsistence Chum Salmon Carcass Fishery

Year	No. of permits issued	Permittees Reporting Catches	Fall Chum Salmon Carcasses
1973	16	8	1,561
1974	21	1/	1,974
1975	26	1/	2,573
1976	36	1/	3,441
1977	46	29	5,816
1978	70	43	2,517
1979	32	25	4,582
1980	57	36	4,915
1981	43	27	5,030
1982	37	13	1,690

Upper Yukon River (Hess Creek to Dall River) Subsistence Salmon Fishery

Year	No. of permits issued	Permittees Reporting Catches	Kings	Chums	Cohos
1974	29	1/	591	1,857	1,271
1975	19	1/	727	778	70
1976	28	18	531	974	-
1977	38	1/	467	2,567	-
1978	57	1/	1,333	9,735	-
1979	55	41	2,194	12,374	-
1980	70	67	1,350	6,488	36
1981	57	24	1,095	12,034	-
1982	64	44	1,935	11,328	20

Upper Yukon River (22 Mile Slough to U.S.-Canadian Border) Subsistence Salmon Fishery

Year	No. of permits issued	Permittees Reporting Catches	Kings	Chums	Cohos
1979	75	60	4,063	30,475	114
1980	48	39	3,649	18,477	6
1981	71	51	4,510	38,333	-
1982	60	61	3,833	15,432	-

1/ Information not available.

Appendix Table 26. Comparative Yukon River drainage king salmon escapements, 1959-1970. [a]

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Andreafsky River												
East Fork		1,020	1,003	675[b]		867		361		380	231[b]	665
West Fork		1,220		762[b]		705	355[b]	303	276[b]	383	274[b]	574[b]
Total		2,240	1,003[b]	1,437		1,572	355[b]	664	276[b]	763	505	1,239
Anvik River		1,950	1,226				650[b]	638	336[b]	310[b]	296[b]	368
Nulato River												
North Fork (including main river)		483	376									
South Fork		273	167									
Total		756	543									
Gisasa River		300	266[b]									
Tozitna River		106[b]										
Chena River		132			137							6[b]
Salcha River		1,660	2,878	937		450	408	800		739	461[b]	1,882
Tatchun Creek								7[b]				100[b]
Little Salmon River										173	120	
Big Salmon River												
Big Salmon Lake-Scurvey Cr										413	77	362
Scurvey Cr - South Big Salmon Ri										414[b]	209[b]	308
Total										827[b]	286[b]	670
Nisutlin River Drainage												
Sidney Cr - 100 Mile Cr										407	105	615
McNeil Ri - Nisutlin Lake										84[b]		122
Wolf Ri (Wolf Lake-Red Ri)												71[b]
Total										491[b]	105[b]	808[b]
Whitehorse Dam (Fishway Counts)	1,054	660	1,068	1,500	484	587	903	563	533	414	334	625

[a] Data obtained from aerial surveys unless otherwise indicated. Only peak estimates are listed.
[b] Incomplete or poor survey conditions resulting in a very minimal count.

Appendix Table 26. (Continued)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Andreafsky River												
East Fork	1,904	798	825		993	818	2,008	2,487	1,180	958[b]	5,343[f]	1,274
West Fork	1,682	582[b]	788	285	421	643	1,499	1,062	1,134	1,500	231[b]	851
Total	3,586	1,380	1,613	285[b]	1,414	1,461	3,507	3,549	2,314	2,458	5,574[b]	2,125
Anvik River Drainage												
Tower Count		1,104	517	471[b]	548	958	1,261	1,088	1,247			
Below Tower Site (includes tributaries)		68	96[b]		172[c]	198[c,d]	93	240	237			
Above Tower Site (includes tributaries		346	126[b]		190	98					807[g]	
Subtotal		414	222[b]		362	296	93	240	237			
Total (best estimate of escapements, combined tower, sonar, aerial, and boat surveys)		1,172	613	471[b]	720	1,156	1,354	1,328	1,484	1,330	807[b]	-
Nulato River												
North Fork (including main river)				55	123	471	286	498	1,093	954		
South Fork				23	81	177	201	422	414	369	791	
Total				78	204	648	487	920	1,507	1,323	791[b]	-
Gisasa River				161	385	332	255	45	484	951		421
Tozitna River					202	42[b]	123	194		257		51
Chena River	193[b,c]	138[b,c]	21	1,035[c]	316[c]	531	563	1,726	1,159	2,541	600[b]	2,073
Salcha River	158[b]	1,193	391	1,857	1,055	1,641	1,202	3,499	4,789	6,757	1,237[b]	2,534
Tatchun Creek	130	97	99	192	175	52	150	200	150	222	133[e]	73
Little Salmon River	275	126	27[b]				171	330	489[b]	286[b]	670	403
Big Salmon River												
Big Salmon Lake-Scurvey Cr	200	112	23[b]		153				555	470	930	174
Scurvey Cr - vicinity Souch Cr		448	52[b]						77	1,098	1,481	583
Total	200[b]	560	75[b]	70[b]	153[b]	86[b]	316[b]	524	632	1,568	2,411	757
Nisutlin River Drainage												
Sidney Cr - 100 Mile Cr	650	237	36[b]		239	102	77	375	713	975	1,626	578
McNeil Ri - Nisutlin Lake	350	46	6[b]		84	50		109		400	168	97
Wolf Ri (Wolf Lake-Red Ri)	750	13			40[b]				183	477	395	104
Total	1,750	296	42[b]	150[b]	363[b]	152[b]	77[b]	484[b]	896[b]	1,852	2,189	779
Whitehorse Dam (Fishway Counts)	856	391	224	273	313	121	277	725	1,184	1,383	1,539	473

a Data obtained from aerial surveys unless otherwise indicated. Only peak estimates are listed.
b Incomplete or poor survey conditions resulting in a very minimal count.
c Boat survey.
d Also includes 94 kings observed in Yellow River.
e Foot survey.
f Sonar estimate.
g Above sonar site.

Appendix Table 27. Estimated potential egg deposition of king salmon in three spawning areas of the Yukon River drainage (Salcha River, Anvik River, and Whitehorse Fishway), 1970-1982.

	Salcha River				Anvik River				Whitehorse Fishway			
Year	est. total escapement[a]	% female	total female	potential egg deposition (10^6)[b]	est. total escapement[c]	% female	total female	potential egg deposition (10^6)[b]	est. total escapement[d]	% female	total female	potential egg deposition (10^6)[b]
1970	1,882	21.0	395	3.56					625	13.2	83	0.75
1971	158[e]	(NO SAMPLES COLLECTED)							856	51.3	439	3.96
1972	1,193	55.3	660	5.96					391	53.8	210	1.90
1973	391	37.6	147	1.33					224	39.0	87	0.79
1974	1,857	25.0	464	4.19					273	40.0	109	0.98
1975	1,055	38.9	410	3.70	720	25.0	180	1.62	313	(NO SAMPLES COLLECTED)		
1976	1,641	41.3	678	6.12	1,155	26.7	308	2.78	121	54.5	66	0.60
1977	1,202	65.9	792	7.15	1,354	50.4	682	6.15	277	57.1	158	1.43
1978	3,499	48.1	1,683	15.19	1,281	53.2	681	6.15	725	46.3	336	3.03
1979	4,789	37.4	1,791	16.16	1,474	19.5	287	2.59	1,184	(NO SAMPLES COLLECTED)		
1980	6,756	45.6	3,081	27.80	1,330	46.4	617	5.57	1,383	54.2	750	6.77
1981	1,237[e]	44.3	548	4.95	807[e]	58.8	475	4.29	1,539	68.7	1,057	9.54
1982	2,534	35.9	910	8.21	--	(NO SURVEY MADE)			473	53.5	253	2.28

a Aerial survey escapement estimates.
b Potential egg deposition is based upon an average fecundity of 9,024 eggs/female.
c Boat or aerial survey escapement estimate.
d Actual weir count.
e Poor survey--minimal escapement estimate.

Appendix Table 28. Comparative Yukon River summer chum aerial escapement surveys, 1974-1982. [a]

	1974	1975	1976	1977	1978	1979	1980	1981	1982
Andreafsky River									
East Fork	3,215[b]	223,485	105,347	112,722	127,050	66,471	36,823[b]	--	180,078[c]
West Fork	33,258	235,954	118,420	63,120	57,321	43,391	115,457	147,312[c]	7,267
Total	--	459,439	223,767	175,842	184,371	109,862	152,280	--	187,345
Anvik River Drainage									
Tower Count	201,277	601,880	237,851	162,614	166,102	37,457	--	--	--
Below Tower Site (includes tributaries)		211,130	168,315	100,240	85,237	280,537[c]	--	--	--
Above Tower Site (includes tributaries)		634,355	243,695	--	--	84,620	--	--	--
Subtotal	--	845,485	412,010	100,240	85,237	--	--	--	--
Total (best estimate of escapements, combined tower, sonar, aerial and boat surveys)	201,277	845,485	406,166	262,754	251,339	280,537[c]	492,676[c]	1,479,582[c]	444,581[c]
Rodo River	16,137	25,335	38,258	16,118	17,845	--	--	--	--
Nulato River									
North Fork (including main river)	22,144	87,280	39,690	58,275	41,659	35,598	11,244[b]	--	--
South Fork	29,016	51,215	9,230	11,385	12,821	1,506	3,702[b]	14,348	
Total	51,160	138,495	48,920	69,660	54,480	37,104	14,948	--	--
Gisasa River (Koyukuk R. drainage)	22,022	56,904	21,342	2,204[b]	9,280[b]	10,962	10,388	--	334
Hogatza River (Koyukuk R. drainage)									
Clear Creek	--	7,610	9,356	6,437	2,716	5,132	12,375	--	4,198
Caribou Creek	--	14,745	10,188	4,297	2,386	9,089	7,411	--	786
Total	--	22,355	19,544	10,734	5,102	14,221	19,786	--	4,984
Tozitna River	1,823	3,512	725[b]	761	2,262	--	580	--	874
Chena River	4,350[d]	2,702[d]	685	610	1,609	1,025	338[b]	3,500[b]	1,509
Salcha River	8,040[e]	7,573	6,474	677	5,405	3,060	4,140	8,500	3,756

[a] Only peak estimates are presented.
[b] Poor survey.
[c] Sonar estimate.
[d] Boat survey.
[e] Combined aerial and boat.

Appendix Table 29. Comparative Yukon River drainage fall chum aerial escapement estimates, 1973-1982. [a]

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
TANANA RIVER DRAINAGE										
Bear Paw River	1,530	2,996	1,657	--	--	--	--	--	--	--
Toklat River drainage										
Upper Toklat River[b]	6,957	34,310	42,418[d]	35,190	21,800[d]	35,000	96,550[d]	23,054	13,907	3,309[e]
Lower Toklat River	--	--	35,867[d]	2,000[c,d]	--	--	64,540	2,140	--	--
Subtotal Toklat R. drainage	6,957[d]	34,310[d]	78,285[d]	37,190	21,800[d]	35,000[d]	161,090	25,194	13,907[d]	3,309[d]
Upper Tanana River drainage										
Benchmark #735 Slough	127[d]	1,450	--	336	1,270	1,705[d]	2,714	1,900[e]	168[d]	--
Delta River	7,971	4,010	3,089[e]	5,498	17,925	10,051	8,125	4,637	22,375[e]	3,433[e]
Upper Tanana River[f]	5,635	4,567	--	4,979	3,797	5,700	20,820	3,444	7,063	--
Bluff Cabin Slough	3,450	4,840	5,000[c,e]	3,197	6,491	5,340	6,875	3,190	6,120	1,156[e]
Delta Clearwater Slough (Onemile Slough)	1,720	1,235	745[c]	1,552	1,900	475	3,850[d]	885[d]	632	--
Subtotal Upper Tanana R. drainage	18,903	16,102	8,834[d]	15,562	31,383	23,271	42,384	14,056	36,358	4,589[d]
SUBTOTAL TANANA R. DRAINAGE	27,390	53,408	88,776	52,752	53,183	58,271	203,474	39,250	50,265	7,898
PORCUPINE RIVER DRAINAGE										
Sheenjek River	1,175[d]	40,507	78,060	11,866	20,506	14,610[d]	41,140	13,027	69,043[g]	29,093[g]
Black River drainage			50							
Salmon Fork River	--	444	1,517	0[d]	--	--	--	--	--	--
Kevenjik Creek	--	1,625	582	7[d]	--	--	--	--	--	--
Fishhole Creek	--	--	--	--	200[d]	--	--	31[d]	--	--
Subtotal Black R. drainage	--	2,069	2,149	7	200			31	--	--
Salmon-Trout River	--	6	350	20	--	--	--	--	--	--
Fishing Branch River (YT)	15,987[h]	32,525[h]	353,282[h]	13,450	32,500	15,000	44,080	20,319[d]	10,549[d]	5,846
SUBTOTAL PORCUPINE R. DRAINAGE	17,162	75,107	433,841	25,343	53,206	29,610	85,220	33,377	79,592	34,939

[a] All surveys rated fair-good unless rated otherwise. Only peak estimates listed.
[b] Includes following areas: Toklat River in vicinity of roadhouse, Shushana River, and Geiger Creek.
[c] Combined aerial and ground survey estimates.
[d] Poor or incomplete survey; very minimal and/or rough estimate.
[e] Foot survey.
[f] Richardson Highway bridge to Blue Creek.
[g] Sonar count.
[h] Weir count.

Appendix Table 30. Comparative Yukon River drainage coho salmon aerial escapement estimates, 1972-1982. [a]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Nenana River											
Lost Slough	--	--	1,388	943	118	524	350	227	499	274	--
Clear Creek	--	--	--	--	13	--	--	--	--	--	--
Wood Creek	--	--	--	--	--	310[b,c]	300[b,c]	--	1,603[b,c]	849[b,h]	1,436[b,h]
Seventeenmile Slough	--	--	27	956	281	1,167	466	1,987	592	1,005	--
Subtotal Nenana River	--	--	1,415	1,899	412	2,001	816	2,214	1,091	2,128	1,436
Delta Clearwater River	632[d,e]	3,322[d]	3,954[d]	5,100[d,e]	1,920[d,e]	4,793[d,e]	4,798[d,e]	8,970[d,e]	3,946[d,e]	8,563[d,e,f]	8,365[d,e,f]
Clearwater Lake and Outlet	417	551[d]	560	1,575[d,e]	1,500[d,e]	730[d,e]	570[d,e]	1,015[d,e]	1,545[d,e]	459[g]	--
Richardson Clearwater River	454[g]	375[d]	652[d]	4[g]	80[g]	327	--	372	611	550	--

a Peak estimates presented only.
b Surveyed by F.R.E.D.
c Foot survey.
d Surveyed by Sport Fish.
e Boat survey.
f Population estimate.
g Poor survey.
h Weir count.

Appendix Table 31. Estimated total catch in thousands of western Alaska and Candian Yukon king salmon by the Japanese mothership fishery, foreign groundfish fisheries and U.S. commercial and subsistence fisheries. (also presented are Japanese landbased drift gillnet king salmon catches; estimated western Alaska interceptions unknown). 1/

Year	Japanese Mothership 2/	Foreign Ground-Fish 3/	Sub-Total	Western Alaska			Total	(Japanese Landbased Drift Gillnet)
				Commercial	Subsistence	Sub-total		
1956	55.4 (137)	-	-	132.7	-	-	-	(18)
1957	15.2 (31)	-	-	158.4	-	-	-	(33)
1958	5.4 (46)	-	-	181.9	-	-	-	(45)
1959	27.8 (68)	-	-	195.1	-	-	-	(42)
1960	135.0 (180)	-	-	195.7	-	-	-	(113)
1961	13.9 (31)	-	-	243.1	-	-	-	(79)
1962	29.7 (122)	-	-	213.1	-	-	-	(124)
1963	40.8 (87)	-	-	208.1	66.2	274.3	315.1	(102)
1964	252.9 (410)	-	-	260.0	50.5	310.5	563.4	(195)
1965	105.5 (185)	-	-	263.0	52.9	315.8	421.3	(93)
1966	111.5 (208)	-	-	207.5	69.5	277.0	388.5	(112)
1967	69.8 (128)	-	-	284.0	81.9	365.9	435.7	(110)
1968	226.3 (362)	-	-	259.0	54.2	313.2	539.5	(88)
1969	435.2 (554)	-	-	287.6	65.2	352.9	788.1	(83)
1970	344.8 (437)	-	-	290.8	95.1	386.0	730.8	(101)
1971	143.6 (206)	-	-	283.2	73.8	357.1	500.7	(134)
1972	169.5 (261)	-	-	224.1	66.7	290.8	460.3	(103)
1973	47.0 (119)	-	-	177.4	69.7	247.1	294.1	(162)
1974	286.8 (361)	-	-	180.2	57.3	237.6	524.4	(186)
1975	109.2 (162)	-	-	126.2	77.2	203.3	312.5	(135)
1976	167.7 (283)	-	-	241.5	84.0	325.6	493.3	(201)
1977	64.5 (93)	43.5	108.0	296.1	84.1	380.2	488.2	(146)
1978	31.3 (105)	39.1	70.4	380.0	74.6	454.6	525.0	(210)
1979	65.0 (126)	100.4	165.4	412.0	99.3	511.3	676.7	(161)
1980	388.0 (704)	111.6	499.6	312.0	113.3	423.3	922.9	(160)
1981	26.0 (88)	44.0	70.0	509.0	130.0	639.0	709.0	(190)
1982 4/	42.7 (107)	21.4	64.1	490.6	111.2	601.8	665.9	(165)

1/ Data from INPFC documents.
2/ Estimates do not include dropouts; (Total catch in parenthesis).
3/ Assumed 100% of the catch is of western Alaska and Candian Yukon origin.
4/ Preliminary estimates.

CAPE ROMANZOF DISTRICT HERRING FISHERY

Commercial Fishery, 1982

A total ot 596 metric tons (100% sac roe) was landed in 1982 which marked the third year this district has been fished commercially (Appendix Table). The entire harvest was taken in Kokechik Bay (Stat. Area 334-08) (Figure). The Board of Fisheries closed the waters outside of Kokechik Bay to commercial fishing at it's December, 1981 meeting. Processing and tender vessels belonging to two buyers were anchored just inside Kokechik Bay near Anikitun Island. Average roe recovery for the season was 9.3%. Average price paid for 10% roe herring was $330/ton with a $30 per 1% point differential. Fishermen earned a total of $218,000 for their catch.

A total of 75 fishermen made at least one delivery during the 1982 season and operated out of approximately 50 boats. Fishing effort was significantly reduced from the previous year. A total of 85% and 80% of the fishermen and boats, respectively, were from the local area, primarily Hooper Bay, Chevak and Scammon Bay. It is estimated that 84% (498 m.t.) of the harvest was made by local fishermen. This extremely high percentage, in comparison to previous years, resulted because virtually no outside competition occurred. Most of the fishing fleet bypassed Cape Romanzof due to the lateness of this year's herring run, and headed for Norton Sound. Also, offloading techniques were improved this year (vaccum pump vs. shoveling in 1981) therby reducing delivery time for local fishermen.

The commercial fishing season opened by regulation on April 15 but fishing did not being until June 2 when a 12 hour fishing period was established by emergency order. (Beginning with the 1982 fishing season the Board of Fisheries established emergency order announcement of fishing periods to afford greater management control). A total of only 19 m.t. of herring was taken by nine non-local boats on June 2. An additional fishing period was announced on June 4 for 24 hours duration, however fishing was extended an additional 24 hours and a total of 79 m.t. were harvested during June 4-6 by the non-local boats. The fleet of nine boats and it's processor departed for the Norton Sound district fishery on June 7. Due to ice conditions in the vicinity of their villages and storms local fishermen were unable to travel to Kokechik Bay until June 7.

A 24 hour fishing period was announced on June 7. Fishing time was extended an additional 24 hour period as commercial catch data and increased spawn deposition indicated a high abundance of herring. A total of 327 m.t. of herring were harvested by 55 local fishermen during June 7-9. Additional spawn deposition and good test fishing catches of maturing herring were documented during subsequent closures. For the remainder of the season local fishermen harvested an additional 171 m.t. of herring during a 48 hour period on June 10-12 and during a 24 hour period on June 13-14.

Overall evaluation of stock condition based on commercial and test fishing catch data and spawning deposition observations indicated a very large abundance of herring in 1982. The majority of the herring were primarily age 4 and 5 year old fish indicating a run of similar magnitude in 1983.

There were two herring processors and their boats in the Cape Romanzof district:

1. <u>Offshore Fisheries</u>:
   (MV) Alaska Enterprise (freezer)
   Westward Wind (freezer)
   Express (freezer)
   Cordova (tender)
   Arctic Dreamer (tender)

2. <u>Lafayette, Inc</u>:
   (MV) Lafayette (freezer)
   Western Pioneer (freezer)
   Northwind (tender)
   Theresa Marie (tender)

Several fishing violations occurred in the Cape Romanzof district. The most common violation was fishing after the closure. It is recommended that a Fish and Wildlife Protection officer, stationed aboard a large vessel, patrol the district in 1983.

<u>Subsistence Fishery, 1982</u>

In 1982 a total subsistence harvest of 9.5 m.t. (20,956 lbs.) of herring were reported taken by 43 fishing families from Hooper Bay, Chevak and Scammon Bay. Subsistence fishing effort and participation were probably decreased from previous years for some of these villages as several persons went commercial fishery in the Cape Romanzof district. Comparative subsistence catch and effort data is presented in Appendix Table 33.

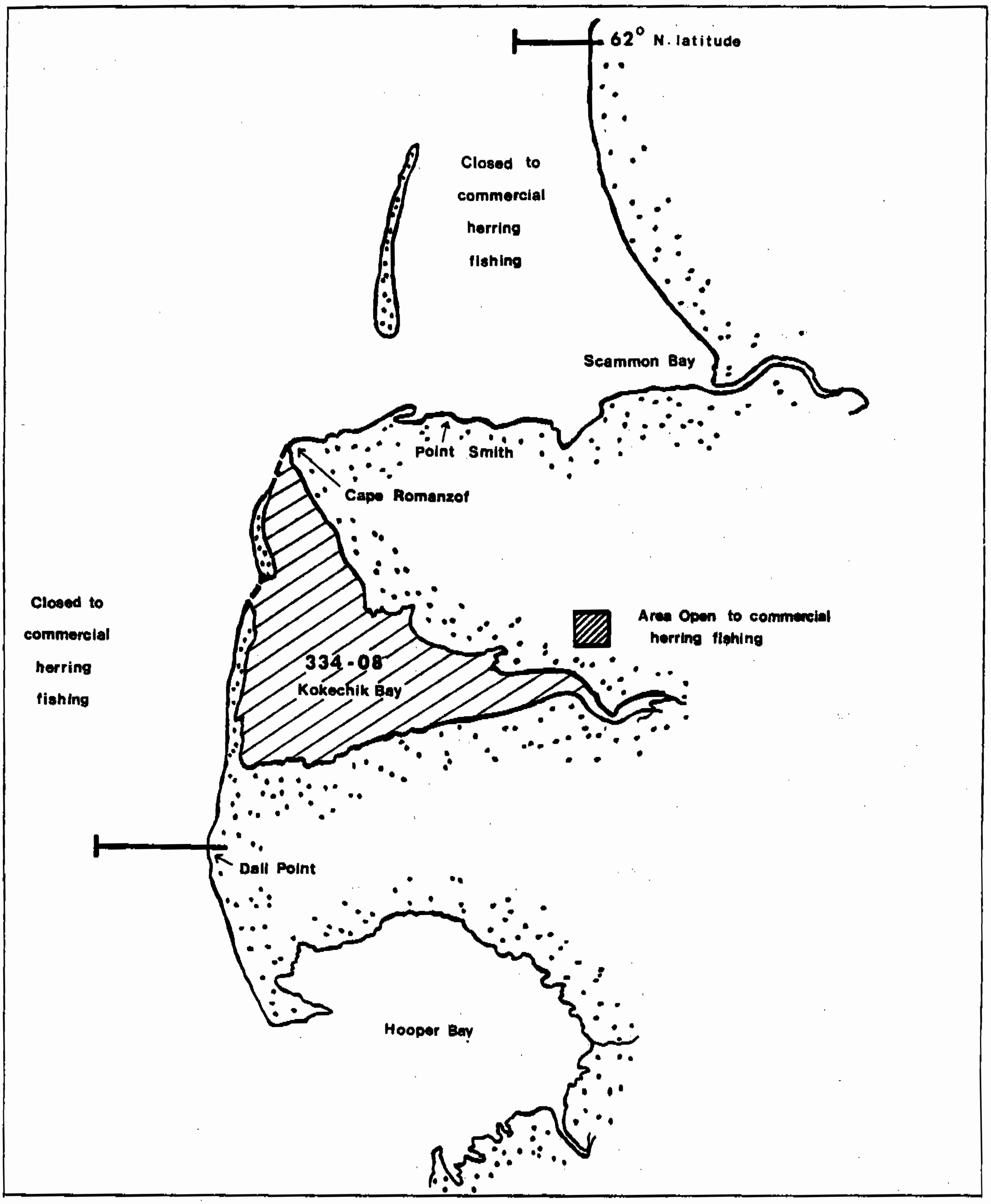


Figure 20. Cape Romanzof herring district and statistical reporting area.

Table 16. Cape Romanzof district commercial herring catch data, 1982.

Date	Catch Sac Roe (metric tons)	% of Total	Catch Bait Herring (metric tons)	% of Total	Average Roe % Daily	Total Daily Catch (metric tons)	Seasonal Catch Accum to Date (metric tons)	Remarks
6/2	19.36	3.25	-	-	10.0	19.36	19.36	Non-local boats only 1 processor
Sub-total 1/	19.36	(3.25)	-	-	10.0	19.36	19.36	
6/4								Inclement weather
6/5	39.0	6.54	-	-	10.0	39.0	58.36	1 processor
6/6	39.95	6.7	-	-	10.0	39.95	98.31	Non-local boats only
Sub-total 2/	78.95	(13.2)			10.0	78.95	98.31	
6/7	70.98	11.9	-	-	10.0	70.98	169.29	
6/8	145.62	24.41	-	-	9.0	145.62	314.91	Local boats only
6/9	110.9	18.6	-	-	9.0	110.9	425.81	1 processor
Sub-total 3/	327.5	(54.91)	-	-	9.3	327.5	425.81	
6/10		No Recorded Deliveries - Inclement Weather						
6/11	125.26	21.0	-	-	8.5	125.26	551.07	Local boats only
6/12	37.68	6.3	-	-	9.2	37.68	588.75	1 Processor
Sub-total 4/	162.94	(27.3)	-	-	8.9	162.94	588.75	
6/13	7.7	1.3	-	-	8.0	7.7	596.45	Local boats only
6/14		No Deliveries Documented						1 Processor
Sub-total 5/	7.7	(1.3)	-	-	8.0	7.7	596.45	
Total	596.45	100.0	-0-	-0-	9.3	596.45	596.45	

1/ 12 hr. period, 10 AM 6/2 to 10 PM 6/2. Temporary season closure from 6/2 to 6/3 to allow evaluation of stock condition and abundance. Season officially opened by emergency order.

2/ 48 hr. period, 9 AM 6/4 to 9 AM 6/6. Temporary season closure from 6/6 to 6/7 to allow evaluation of stock condition and abundance.

3/ 48 hr. period, 12 noon 6/7 to 12 noon 6/9. Temporary season closure from 6/9 to 6/10 to allow evaluation of stock condition and abundance.

4/ 48 hr. period, 6 PM 6/10 to 6 PM 6/12. Temporary season closure from 6/12 to 6/13 to allow evluation of stock condition and abundance.

5/ 24 hr. period, 6 PM 6/13 to 6 PM 6/14. Season permanently closed 6 PM June 14.

Appendix Table 32. Commercial herring fishery data, Cape Romanzof District, 1980-1982.

	1980	1981	1982
Catch	554 m.t	653 m.t.	596 m.t
Roe Recovery	9.8%	8.0%	9.3%
Estimated Value 1/	$110,000	$212,000	$218,000
Number of Buyers	2	4	2
Number of Fishermen 2/	69	111	75

1/ Value to fishermen.
2/ Interim use CFEC permit holders.

Appendix Table 33. Subsistence herring catches village, Yukon area, 1975-1982.

	Catches in Pounds (No. Fishing Families)							
	1975	1976	1977	1978	1979	1980	1981	1982
Scammon Bay	- 1/	1,390(4)	- 1/	1,300	12,000(21)	6,270(18)	15,400(16)	7,750(15)
Chevak	- 1/	1,400(9)	300(2)	- 1/	4,600(21)	7,100(20)	4,264(10)	3,860(10)
Hooper Bay	5,543(34)	6,007(28)	4,750(28)	7,780(29)	6,145(42)	7,375(23)	7,914(20)	9,346(18)
Total	5,543(34)	8,797(41)	5,050(30)	9,080(29)	22,745(84)	20,745(61)	27,578(46)	20,956(43)

1/ Information not available.

COMMERCIAL FRESHWATER FISHERIES

Regulations adopted by the Board of Fisheries allow the Department of Fish and Game to issue permits for the commercial harvest of miscellaneous species of fish such as whitefish, sheefish, char, trout pike, blackfish and lamprey. Permit authorization is not required for the sale of these species when taken incidentally in conjunction with commercial salmon fishing.

Commercial fisheries for species other than salmon have been allowed in widely scattered locations throughout the Yukon and Tanana River drainages and in the Colville River on the North Slope; most of these fisheries are limited, experimental-type operations and occur only sporadically.

A commercial fishery for whitefish has existed in the Colville River delta (located approximately 60 miles west of Prudhoe Bay) since 1964. Fishing generally takes place during late June and July for broad and humpback whitefish, and October through early December for arctic and least cisco. Set gillnets (of 3- and 5-inch stretch measure) are used as capture gear, and fishing during fall months occurs under the ice (Appendix Table 34).

In the upper Yukon area set net fisheries targeting on whitefish have been permitted in recent years in Lake Minchumina and Healy Lake. Catch data are presented in Appendix Table 35.

Numerous other permits allowing limited harvests of whitefish, primarily for the upper Yukon area, have been issued; for reasons unknown, these fisheries did not occur.

Permits for the taking of non-salmon species have been issued for various locations in the lower Yukon area. Reported harvests for those fisheries are presented in Appendix Table 36. Set gillnets are primarily used for taking whitefish and sheefish and the catch is marketed in local village stores or Bethel.

Appendix Table 34. Colville River commercial catches, 1964-1982

Year	Broad whitefish	Humpback whitefish	Arctic cisco ("kaktok")	Least cisco ("herring")
1964	2,951[a]		16,000	9,000
1965	3,000[a]		50,000	
1966	2,500[a]		40,000	
1967	data not available			
1968	3,130		42,055	18,180
1969	data not available			
1970	2,080[a]		19,602	25,930
1971	3,815	132	38,016	22,713
1972	3,850	1,497	37,333	13,283
1973	2,161		71,569	25,188
1974	3,117	2,316	35,601	13,813
1975	2,201	1,946	28,291	20,778
1976	2,172	1,815	31,659	34,620
1977	443	1,431	31,796	14,961
1978[b]	20[c]	1,102	17,292	21,589
1979	[c]	1,831	8,684	24,984
1980	[c]	4,231	14,657	31,459
1981	1,035	469	38,206	16,584
1982	1,662	201	15,067[d]	25,746[d]

[a] Includes small numbers of humpback whitefish.
[b] Also reported taken were 1 king salmon, 2 red salmon, 9 chum salmon, and 118 pink salmon.
[c] No fishing effort during June or July.
[d] No fishing effort during November or December.

Average weights: Broad whitefish 5.1 lbs.
Least cisco 0.91 lbs.
Arctic cisco 1.0 lbs.

Appendix Table 35. Commercial whitefish catches, upper Yukon area, 1972-1982.

Healy Lake			Lake Minichumina		
Year	Number	Pounds	Year	Number	Pounds
1972	2,605	3,950	1971	3,277	9,831
1973	2,187	3,915	1972	718	2,154
1974	1,885	3,390	1973	1,697	5,037
1975	1,357	2,375	1974	854	2,562
1976	1,440	2,625			
1979	1,336	2,306			
1980	data not available				
1981	no effort				
1982	no effort				

Appendix Table 36. Commercial freshwater fishery catches, lower Yukon area, 1978-1982.

	Sheefish		Whitefish		Blackfish	Burbot		Pike
Year	Number	Pounds	Number	Pounds	Pounds	Number	Pounds	Pounds
1978	-	-	19	87	-	-	-	-
1979	5	39	23	55	-	-	-	-
1980	283	2,265	78	250	293	-	-	-
1981	299	2,812	779	2,875	-	-	-	9
1982	754	6,161	1,633	6,214	-	102	482	-

Attachment 1. List of Yukon Area emergency orders issued, 1982.

Number	Effective Date	Action Taken	Comments
3-Y-1-82	June 2	Establish 12 hour fishing period in the Cape Romanzof district herring fishery.	Test fishing and spawning ground observations indicate herring are present in harvestable numbers.
3-Y-2-82	June 4	Establish 24 hour fishing period in the Cape Romanzof district herring fishery.	Test fishing catches indicate herring are abundant.
3-Y-3-82	June 5	Extend previous fishing period an additional 24 hours in the Cape Romanzof district herring fishery.	Adverse weather conditions prevented fishing during previous fishing period.
3-Y-4-82	June 7	Establish 24 hour fishing period in the Cape Romanzof district herring fishery.	Adverse weather conditions to date have hampered fishing effort. A total of 98 m.t. taken toward 350 m.t. guideline harvest level.
3-Y-5-82	June 8	Extend previous fishing period an additional 24 hours in the Cape Romanzof district herring fishery.	Commercial catch rates and spawn deposition observations indicate high abundance of herring.
3-Y-6-82	June 10	Establish fishing period (unspecified length) in the Cape Romanzof district herring fishery.	Test fishing and spawning ground observations during closure indicate continued high abundance of herring.
3-Y-7-82	June 12	Closed present fishing period which opened on June 10 in the Cape Romanzof district herring fishery.	A total catch of 570 m.t. has has been taken which exceeded the 350 m.t. guideline harvest level.
3-Y-8-82	June 13	Establish a 24 hour fishing period in the Cape Romanzof district herring fishery.	Additional spawning and continued high abundance of herring were documented during the closure.
3-Y-9-82	June 14	Open the commercial salmon fishing season and establish two - 24 hour fishing periods a week in districts 1 and 2.	Monitoring of test fishing and subsistence king salmon catches indicate that large numbers of of fish have entered the Yukon River.

3-Y-10-82	June 28	Open commercial salmon fishing season and reduce fishing time to two 24 hour periods a week in district 3.	King salmon are present in harvestable numbers and well distributed throughout the district. Fishing time reduced to provide for better balanced catch and escapements.
3-Y-11-82	July 4	Specify that only gillnets of 6 inch or smaller mesh size may be operated and increase fishing time from 2 to 2 1/2 days a week in districts 1 and 2.	Action taken to allow harvest of more abundant summer chums and to minimize catch of late king run.
3-Y-12-82	July 4	Specify that only gillnets of 6 inch or smaller mesh size may be operated by commercial fishermen in districts 1 and 2.	Action taken to prevent king salmon taken under the guise of subsistence fishing from entering commercial channels.
3-Y-13-82	July 7	Close the commercial salmon fishing season in district 3.	The 1,800-2,200 king salmon guideline harvest range was exceeded.
3-Y-14-82	July 14	Close the commercial salmon fishing season in subdistricts 5-A, 5-B and 5-C.	The 2,400-2,800 king salmon guideline harvest range was exceeded.
3-Y-15-82	July 26	Reopen the commercial salmon fishing season in district 3.	Fall chum salmon are present in harvestable numbers.
3-Y-16-82	August 1	Close the commercial salmon fishing season in subdistrict 5-D.	The 300-500 king salmon guideline harvest range was exceeded.
3-Y-17-82	August 8	Close the commercial salmon fishing season in district 6.	The summer chum and king salmon runs are essentially over. Season will reopen in September for the fall chum fishery.
3-Y-18-82	August 15	Close the commercial salmon fishing season in districts 1, 2 and 3.	The midpoint of the 120,000 to 220,000 fall chum salmon guideline harvest range was exceeded.
3-Y-19-82	August 20	Close the commercial salmon fishing season in subdistrict 4-B.	Early portion of upper Yukon fall chum appears too weak to allow continued commercial harvest.
3-Y-20-82	August 25	Reduce subsistence fishing time to 3 days a week in subdistrict 4-B and district 5.	Early portion of upper Yukon fall chum run continues to appear weak and subsistence fishing restrictions are necessary for increased escapements.

3-Y-21-82	Sept. 4	Increase subsistence fishing time to 5 days a week in subdistrict 5-A.	Subsistence and test fishing catches indicate that the fall chum run (Tanana River origin) is average to above average in magnitude.
3-Y-22-82	Sept. 4	Reopen commercial salmon fishing season in subdistrict 5-A.	Subsistence and test fishing catches indicate that the fall chum run (Tanana R. origin) is average to above average in magnitude.
3-Y-23-82	Sept. 4	Increase subsistence fishing time to 5 days a week in subdistrict 4-B.	Majority of fall chum run has passed through the subdistrict and restricted subsistence fishing time no longer required.
3-Y-24-82	Sept. 11	Increase subsistence fishing time from 3 to 5 days a week in subdistricts 5-B & 5-C.	Late portion of fall chum run (upper Yukon stocks) showed unexpected run strength based on subsistence catch monitoring.
3-Y-25-82	Sept. 11	Reopen commercial salmon fishing season for one week and allow two-24 hour weekly fishing periods in subdistricts 5-B and 5-C.	Late portion of upper Yukon fall chum run showed unexpected strength and a limited commercial harvest is warranted.
3-Y-26-82	Sept. 14	Close the commercial salmon fishing season in subdistricts 4-C and 5-A.	The majority of the fall chum and coho salmon run has passed through the area.
3-Y-27-82	Sept. 14	Reopen the commercial salmon fishing season in district 6.	The fall chum and coho run is well distributed through the district and a reopening of the commercial fishing season is warranted.
3-Y-28-82	Sept. 14	Correct errors in E.O. 3-Y-25-82.	Corrected errors regarding fishing period schedule in subdistricts 5-B and 5-C.
3-Y-29-82	Sept. 17	Increase subsistence fishing time to 5 days a week in that portion of subdistrict 5-D upstream to 12 Mile Island.	Late portion of upper Yukon fall chum run shows unexpected strength.
3-Y-30-82	Sept. 20	Close the commercial salmon fishing season in district 6.	The midpoint of the 5,500 to 20,500 fall chum and coho salmon guideline harvest range has been exceeded.
3-Y-31-82	Sept. 22	Increase subsistence fishing time to 5 days a week in that portion of subdistrict 5-D from 12 Mile Island to U.S./Canada border.	Late portion of upper Yukon fall chum run shows unexpected strength.
3-Y-32-82	Sept. 23	Reopen the commercial salmon fishing season for one week and allow two-24 hour fishing periods in subdistrict 5-D.	Late portion of upper Yukon fall chum run showed unexpected strength and a limited commercial harvest is warranted.

Attachment 2. Summary of 1982 Yukon area commercial and subsistence fishing regulations promulgated by the Board of Fisheries during Anchorage meeting, December, 1981.

Section	Action Taken
5AAC 27.905.(a) DESCRIPTION OF DISTRICTS AND SUBDISTRICTS.	Closed the outer waters of the Cape Romanzof herring district to commercial fishing (only the waters of Kokechik Bay remain open).
5AAC 27.910.(a)(1) FISHING SEASONS AND WEEKLY FISHING PERIODS.	Established emergency order announcement of weekly commercial fishing period openings and closures in the Cape Romanzof herring district.
5AAC 27.931.(a) GILLNET SPECIFICATIONS AND OPERATION.	Specified that not more than 100 fathoms of herring gillnet may be operated from any licensed fishing vessel in the Cape Romanzof district.
5AAC 01.210.(c)(1) FISHING SEASONS AND WEEKLY FISHING PERIODS.	Eliminated the two day a week subsistence fishing closure during June 10 to August 20 when the commercial salmon fishing season is closed in districts 1, 2 and 3.
5AAC 01.220.(e)(1) LAWFUL GEAR AND GEAR SPECIFICATIONS.	Allowed the use of subsistence drift gillnets for the taking of king salmon from June 10 through June 22 in subdistrict 4-A upstream of Stink Creek.
5AAC 05.200.(f)(3) FISHING DISTRICTS AND SUBDISTRICTS.	Redescribed subdistrict 6-C by moving the upper boundary to the mouth of the Salcha River.
5AAC 05.320.(1)(A), (2)(A) WEEKLY FISHING PERIODS.	Established emergency order announcement of weekly commercial fishing periods during June 5 through July 15 in districts 1 and 2.
5AAC 05.310.(2)(D) FISHING SEASONS.	Established a June 24 opening of the commercial salmon fishing season in subdistrict 4-A upstream of Stink Creek.
5AAC 05.320.(4)(B)(C) WEEKLY FISHING PERIODS.	Established 3:00 p.m. opening and closing times for weekly commercial fishing periods after August 15 in subdistricts 4-B and 4-C.
5AAC 05.334.(a) IDENTIFICATION OF GEAR.	Required that commercial drift gillnets be marked with the fisherman's five digit CFEC permit number in the Yukon area.
5AAC 05.035.(c) MINIMUM DISTANCE BETWEEN UNITS OF GEAR.	Eliminated the 200 feet minimum distance requirement between fishwheels in the area from Old Paradise Village to 4 miles upstream of Anvik in subdistrict 4-A.

Attachment 3. Summary of special projects conducted in the Yukon area by the Division of Commercial Fisheries, 1982.

1. LOWER YUKON TEST FISHING.

a. Location:

1) Big Eddy Test Fishing Project: Kwikluak Pass near Emmonak (South Mouth of the Yukon River delta).

2. Middle Mouth Test Fishing Project: Kawanak and Apoon Passes (Middle and North mouths of the Yukon River delta).

3) Fish Village Experimental Drift Test Fishing Project: Heads of Passes area of the Yukon River delta).

b. Objectives:

1) Big Eddy and Middle Mouth Projects: To determine the run timing, distribution and relative abundance of king, summer chum, fall chum and coho salmon in the lower Yukon River using set gillnets.

2) Fish Village Experimental Drift: To determine the feasibility of using drift gillnets to determine run timing and relative abundance of summer chum salmon in the lower Yukon River.

c. Results:

1) Big Eddy Test Fishing:

KING AND SUMMER CHUM: Index set nets for king and summer chum salmon were operated continuously from June 6 to July 15. Catch totals were down significantly from the record 1981 levels. A total of 633 king and 2,042 summer chum salmon were captured. The mean dates (the dates on which statistically the central point of the migration passed the test fishery) were calculated to be June 21 for king and June 17 for summer chum.

FALL CHUM AND COHO: Index set nets for fall chum and coho salmon were operated from July 16 to August 31. A total of 579 fall chum and 724 coho were taken. Fall chum catches were significantly down from the 1981 levels. The test fishing data indicated mean dates of July 30 and August 18, for fall chum and coho salmon, respectively.

2) Middle Mouth Test Fishing:

KING AND SUMMER CHUM: Index set nets for king and summer chum salmon were operated from June 9 to July 15. Test net catches were down from 1981 levels, with a total of 1,079 king and 1,234 summer chum captured. Mean dates of migration were calculated to be June 23 and June 24 for king and summer chum, respectively.

FALL CHUM AND COHO SALMON: Index nets for fall chum and coho salmon were operated from July 15 to August 31. The fall chum catch of 877was down from 1981 levels, while the

coho catch of 905 showed an increase. Mean dates of August 6 and August 20 were calculated for fall chum and coho, respectively.

3) FISH VILLAGE EXPERIMENTAL DRIFT. Drift test nets proved to be a feasible method of determining run timing for summer chum salmon. A total of 1,333 summer chums were captured with the calculated mean date of migration of June 20, falling between the respective mean dates from Big Eddy and Middle Mouth. Because there was no comparative historical data, relative abundance could not be tested this first year. The project is being continued on an experimental basis in 1983.

2. UPPER YUKON RIVER TEST FISHING

a. Location:

1) Stink Creek: West bank of Yukon River approximately 4.5 miles upstream of Stink Creek (site 1).

2) Ruby: South bank of Yukon River approximately 24 miles upstream from Ruby (site 2) and north bank of Yukon River approximately 24 miles upstream from Ruby (site 3).

b) Objectives: To determine run timing, distribution, and relative abundance of summer chum, fall chum, and coho salmon in the middle portion of the Yukon River drainage.

c) Results:

Summer Chum Salmon: An index fishwheel was operated from June 24 through July 23. A total of 9,741 chums was captured. Peaks in migration occurred July 3 through July 7 and July 10 through 13.

Fall chum and Coho Salmon: At site 2 (south bank), a fishwheel was operated from August 6 through September 14. A total of 4,114 chums and 329 cohos were captured. Peak catches were made between August 30 and September 9.

At site 3, a fishwheel was operated from August 11 through September 8. Peaks in the chum migration occurred on August 17 and August 30 and 31. A total of 1,594 chums was captured during the duration of the project.

3. SUBSISTENCE SALMON FISHERY SURVEYS

a. Location: Yukon, Koyukuk, Tanana Rivers, and Yukon Territory Villages.

b. Objectives: Determine subsistence utilization of salmon and fishing effort needed for formulating future management procedures and goals; also collect tag recoveries from high seas and Department tagging programs.

c. Results: A total of 1,071 fishing families were surveyed in the Yukon River drainage and their catches totaled 36,385 king salmon and 433,219 other salmon. A total 1,000 river miles was traveled by boat and 500 air miles by single engine aircraft in conducting the survey. Yukon Territory subsistence catch data was furnished by Environment Canada - Fisheries Service (Whitehorse Office).

4. COMMERCIAL SALMON CATCH SAMPLING

a. Location: Various locations in the different district fisheries.

b. Objectives: Obtain age, sex and size information for commercially caught fish.

c. Results: Several hundred samples of king, chum and coho salmon were collected in 1982. Detailed age, sex and size composition data has been compiled and will be presented in a separate report.

5. CHINOOK SALMON STOCK BIOLOGY

a. Location: Various locations in the different district fisheries and major spawning escapements throughout the Yukon River drainage.

b. Objectives: Determine the stock composition of the Yukon River commercial and subsistence chinook salmon fisheries. This information, in conjunction with data collected from the major spawning escapements, will be used to build a stock-specific data base of basic fishery statistics for Yukon chinook salmon.

c. Results: Commercial catch sampling for age, sex and size data was expanded to sample 300 fish per fishing period in the district 1 and 2 commercial fisheries. Age and sex computations were calculated in-season and these summaries were supplied to fishery managers for use during the fishery.

Major chinook salmon spawning escapements throughout the Yukon River drainage were sampled for age, sex and size data. Samples were mostly collected from carcasses sampled during the peak spawner die-off. Sampled escapements include the Anvik, Andreafsky, Salcha, Chena, Big Salmon, Little Salmon, Nisutlin, and Mitchie Rivers.

All Yukon River chinook salmon scale samples, including samples collected from District 4 and 6 fisheries and samples collected by the Canadian Fisheries Service, were coalesced and aged by the project biologist. Age, sex, and size summaries were computed for all Yukon River chinook salmon fisheries and sampled spawning escapements. These data will be published in a separate catch and escapement report.

Scale samples collected from the spawning escapements are currently being digitized. These scale measurements will be used

to build a stock identification model for allocation of the Yukon River fisheries to geographic area of origin. These data will be published in a separate informational leaflet.

6. ANDREAFSKY RIVER ESCAPEMENT STUDY

a. Location: River mile 20 of the East Fork Andreafsky River.

b. Objectives: Enumerate summer chum and king salmon escapement to the East Fork Andreafsky River using side-scan sonar. Collect chum and king salmon beach seine and carcass samples for age, sex and size data.

c. Results: Escapement to the East Fork Andreafsky River in 1982 was estimated by side-scan sonar to be 181,352 summer chum salmon. King salmon escapement could not be accurately estimated, but appeared to be lower than the 1981 escapement of over 5,000. Pink salmon were present in record numbers, and may have exceeded 1 million based on visually observed passage rates. The chum salmon escapement was 65% female and 73% age 4_1. King salmon beach seine and carcass samples were only 15% female, and age 5_2 accounted for 49% of the total.

7. ANVIK RIVER JUVENILE SALMON STUDY

a. Location: River mile 48 of the Anvik River.

b. Objectives: Determine the feasibility of estimating juvenile salmon abundance and outmigration timing using minnow traps and beach seines. Collect length and weight data from fry catch samples.

c. Results: Minnow traps and beach seines were not feasible for capturing large numbers of juvenile salmon in the Anvik River. High water after river ice breakup flooded beaches and restricted attempts to beach seine. Chum salmon fry are present in the river 2 months after breakup. Large catches of king salmon fry occurred in late July, and suggests that they may overwinter in the Anvik River before moving into the Yukon River the following spring. Only 3 king salmon smolt were captured, but sampling was ineffective during spring breakup and flooding, when most of the smolt may have been migrating. Future juvenile salmon studies should test the feasibility of fyke nets and inclined plane traps, both of which are stationary floating gear which could be operated in high water.

8. ANVIK RIVER ESCAPEMENT STUDY

a. Location: River mile 48 of the Anvik River.

b. Objectives: Enumerate summer chum and king salmon escapement to the Anvik River using side-scan sonar. Collect chum and king salmon beach seine and carcass samples for age, sex and size data.

c. Results: Escapement to the Anvik River was estimated by side-scan sonar to be 444,581 summer chum salmon. Age 4_1 was predominant, accounting for 67% of all samples and females outnumbered males 2 to 1. King salmon escapement was not estimated due to poor aerial survey conditions. Carcass samples indicate that the king salmon escapement was only 28% female, with age classes 4_1 and 5_1 accounting for the majority of the fish. The pink salmon run was one of the largest in recent years according to local fishermen, and escapement was estimated to be 76,800 based on expansion of visual counts.

9. MAIN CHANNEL YUKON RIVER SONAR

a. Location: One mile upstream from Pilot Station or 123 miles from the mouth of the Yukon River.

b. Objectives:

1) Compare the operating characteristics of a single-ping sonar system with those of a multiple-hit system.

2) Determine the behavior of migrating adult salmon with respect to temporal and spatial distribution, and estimate their numbers.

3) Determine the ambient noise level, volume, and surface and bottom reverberation characteristics of the deployment sites in order to ascertain useful ranges and the probability of salmon detection.

4) Determine the target strength distribution of fish so that the probability of detection can be more usefully understood.

c. Results:

1) Single-ping and multiple-hit comparison:
The single-ping system operated from 14 to 22 June; one of its two transducers became stuck in bottom sediments and was lost to the river. The multiple-hit system operated from 21 June to 9 July.

Echograms of the multiple-hit system indicated that very few fish were in sampled sectors of the water column beyond 80 meters from the south bank. The data imply that most of the single-ping counts were the result of river current noise.

Because of the way that the single-ping system processes signals, it is impossible to separate fish counts from non-fish counts. On the other hand, echograms of the multiple-hit system provide a permanent record of events and upstream swimming fish are easily distinguished from downstream moving objects and river current noise.

2) Fish Distribution and Numbers:

a. The majority of fish observed from the south bank were within 60 meters from shore. Surface current velocities in this zone were less than 4 feet per second.

b. Only one fish was observed in mid-channel during a 3 hour scan from an anchored skiff position. Surface current velocities in mid-channel were approximately 6 feet per second.

c. Fish were observed from the north bank to a distance of 50 meters. This was a very turbulent zone characterized by current boils and moving whirlpools. Surface current velocities next to shore were approximately 2 feet per second. Greatest surface velocities were recorded toward mid-channel of this zone; they were approximately 9 feet per second.

d. Estimates were made of fish passage.

3) Baseline data were collected on reverberation characteristics, current noise and useful ranges.

4) Baseline data were collected on target strengths.

10. MELOZITNA RIVER ESCAPEMENT STUDY

a. Location: River mile 4 of the Melozitna River.

b. Objectives: Determine timing and magnitude of salmon escapements to this river and collect salmon age-sex-size information.

c. Results: An estimated total escapement of 19,710 summer chum salmon was made with two side-scanning sonar units in 1982. A very small but unknown percentage of the sonar estimates was attributed to king salmon. The salmon run peaked on July 14, being at least 10 days later than in 1981. Based upon salmon distribution past the sonar site in 1982, the 1981 sonar estimate was expanded to 39,178 summer chum salmon, which indicated 1982 escapement was at least 42% lower than 1981 escapement to this river.

Extremely low river water levels prevented successful test fishing in the Melozitna River, with a subsequent loss of age-sex-size information on salmon escapements.

11. SHEENJEK RIVER ESCAPEMENT STUDY

a. Location: River mile 6 of the Sheenjek River.

b. Objectives: Determine timing and magnitude of salmon escapement to this river and collect salmon age-sex-size information.

c. Results: A sonar estimate of 29,093 fall chum salmon was obtained for the Sheenjek River in 1982. Peak passage occurred on September 16.

Test gillnetting showed the chum salmon sex composition to be 42% males and 58% females. Escapement was predominated by age 5_1 (49%) and age 4_1 (47%) fish. Age 3_1 fish accounted for approximately 3%, while less than 1% were age 6_1. Overall, males averaged 27mm larger than females.

12. CAPE ROMANZOF HERRING PROJECT

a. Location: Kokechik Bay and Scammon Bay

b. Objectives: Determine distribution, timing and relative abundance of spawning herring and collect information on spawn deposition and and mortality. Collect age, sex, and size and maturity information on herring from test fishing and commercial catches.

c. Results: A total of 5,195 herring were caught in test nets (variable mesh gillnets) during the period May 22 through June 19. Initial spawning occurred May 28. The magnitude of the run was larger than previous years, based on test fishing catches and spawning ground surveys. In general, spawn deposition appeared more extensive and heavier than in past years. Observed spawn mortality was in excess of 50% in some areas. The majority of the sampled herring were age 4 and 5.

YUKON AREA COMMERCIAL AND SUBSISTENCE SALMON FISHERIES
1983 MANAGEMENT PLAN
Attachment 4

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INTRODUCTION

This management plan was developed to inform fishermen, processors and other interested persons about the status of the 1983 Yukon river salmon runs and Department strategies that may be used to regulate the various fisheries. Statements made concerning anticipated run magnitudes and management strategies are based on the best information presently available.

The Division of Commercial Fisheries of the Alaska Department of Fish and Game is responsible for the management of commercial and subsistence fisheries in the Yukon area. The overall objective of the Department's research and management programs is to manage the various salmon runs for optimum sustained yield. The commercial fishery is regulated on the assumption that a harvestable salmon surplus, after providing for spawning and subsistence utilization requirements, is available.

Subsistence has been designated by the Legislature (State Law 151) as the highest priority among beneficial users of the fish and game resources. Except in areas where intensive commercial fisheries occur, the subsistence fishery is subject to few restrictions in order to give preference to subsistence users. In the major commercial fishing areas the majority of the fishermen usually take salmon for both commercial and subsistence purposes. Therefore, in order to enforce commercial fishing regulations, it is necessary to place some restrictions on the subsistence fishery.

Management is made difficult by the complexity of the salmon runs and fisheries in addition to the huge size of the drainage. Since most of the commercial fisheries have only developed or expanded in recent years, there is a lack of adequate escapement and return data on which to fully evaluate the effects of increased commercial harvests. The various fisheries scattered over 1,400 river miles harvest mixed stocks usually several weeks and hundreds of miles from their spawning grounds. Because the Yukon River commercial fishery is essentially a "cape fishery" (fishing on mixed stocks), some tributary populations may be under or overharvested in relation to their actual abundance. For example, in a mixed stock fishery, where it is impossible to manage each stock separately, small spawning populations may be reduced to very low levels or even eliminated.

Due to the turbid water conditions of the main river and the vast size of the drainage (330,000 square miles), one-third of which is in Canada, accurate in-season assessment of the escapement immediately past the intensive downriver fishery is very difficult with the present available technology and funding. Management is also hampered by the variable run timing and pattern of entry into the lower fishery. Comparison of commercial catch and catch per unit effort data for estimating run abundance between years is of limited usefulness due to rapid changes in the fishery (increased effort and efficiency). Greater dependence is placed on test fishing information, however there is a limited data base since most projects were initiated only since 1980.

New research projects are underway and other programs are planned, once additional funding becomes available, to obtain the biological information necessary for better management of the salmon runs. For example, king salmon stock separation studies using scale analysis techniques were begun in 1980.

If major stocks can be identified from this program then the fishery may be more effectively regulated in order to achieve the proper balance between catch and escapement. Other recent studies initiated include expansion of the test fishing program, sonar assessment of run strength in the main river and upgrading escapement documentation in tributary streams (additional side scanning sonar projects and increased aerial survey coverage).

As a result of the difficulty in obtaining the necessary biological information, the mixed stock situation, increased effort and efficiency of the commercial fishery, allocation problems and the need to provide for subsistence, the management of the Yukon River salmon runs must take a conservative approach. This is achieved by establishing harvest range guidelines, mesh size restrictions and weekly fishing period and season closures. If it becomes apparent during the fishing season that the run is substantially smaller or larger than needed for escapement and subsistence requirements, the commercial harvest rates will be adjusted through the use of the emergency order. In most cases in-season restrictions (reductions in fishing time or season closures) will be necessary for conservation purposes.

MAJOR REGULATION CHANGES

At its December, 1982 and March, 1983 meetings the Board of Fisheries adopted the following major regulation changes for the Yukon area:

1. Initial fishing vessel district registration is accomplished by indicating on the fish ticket the district in which the the vessel was first used to take salmon.
2. Established 24 hour subsistence only fishing periods by emergency order announcement during the commercial fishing closures in districts 1 and 2.
3. Fall chum and coho salmon fishery: Established an approximate one week closure of the commercial fishing season and provided for emergency order announcement of weekly fishing periods in districts 1, 2 and 3. A set net only area was established in the lower portion of district 1. Guideline harvest levels for all districts remained unchanged (refer to Management Strategy sections for further explanation).

STATUS OF STOCKS AND FISHERY

King Salmon: The Yukon River commercial salmon fishery in Alaska dates back to 1918. Since 1961 king salmon commercial catches have ranged from 63,700 to 157,600 fish and the recent 5 year average (1978-82) is 132,600. The majority of the commercial harvest occurs in districts 1 and 2. In addition to the Alaskan catch, the commercial fishery at Dawson (Yukon Territory) harvests an average of 7,200 kings annually (5 year average). Throughout the Yukon River drainage an average of 36,500 kings are taken annually (5 year average) for subsistence use.

Spawning populations of king salmon are widely distributed throughout the drainage and have been documented in the Archuelinguk River located 80 miles from the mouth of the Yukon River and as far upstream as the headwaters of the drainage in the Yukon Territory of Canada, nearly 2,000 miles from the mouth. Major spawning streams in Alaska include the Andreafsky, Anvik, Nulato, Gisasa, Salcha and Chena Rivers. In the Canadian portion of drainage,

important systems include the Big Salmon and Nisutlin Rivers.

Yukon River king salmon runs during 1972-76 generally declined in magnitude based on available comparative catch and escapement data. Restrictions placed on the commercial fishery during the 1970's have generally resulted in improved escapements. Escapements in 1977-81 were above average and even greater in some instances to the levels observed during the early 1960's prior to maximum development of the commercial fishery. Commercial catches for the same period have been above average also. In 1982 king salmon catches were above average, however escapements were average in magnitude except in the Tanana River where escapements were strong.

Western Alaska king salmon (primarily 4 year old fish, average weight of 6 pounds), including those from the Kuskokwim and Yukon Rivers, continue to be intercepted by foreign high seas fishing fleets. In 1980 the Japanese mothership gillnet fleet made a record catch of 704,000 king salmon of which 388,000 were estimated to be of western Alaska origin. Also, the foreign trawl fishery in the Bering Sea harvested an additional 110,000 king salmon in 1980 with the majority of this harvest composed of western Alaska stocks. Therefore a minimum total of nearly 500,000 western Alaska king salmon were harvested by foreign high seas fishing fleets in 1980 which exceeded the domestic fisheries harvest. This interception estimate does not include unreported dead loss from high seas gill nets or possible interception by other foreign fleets (Gulf of Alaska trawl fisheries, Japanese land-based drift gillnet fishery). Interceptions of this magnitude pose a serious management risk and a major economic loss to the domestic fisheries.

Following complaints from western Alaska fishermen groups regarding the very large 1980 high seas catch, the Japanese voluntarily agreed to limit their mothership catch to 110,000 king salmon per year and their trawl harvest to 90% of the 1980 level. Reported high seas catches were at reduced levels in 1981 and 1982 (88,000 and 107,000 kings taken in the mothership fishery and 44,000 and 21,000 kings taken in the trawl fishery in 1981 and 1982, respectively).

Summer Chum Salmon: Prior to the mid 1960's summer chum salmon were used primarily for subsistence purposes, mostly for sled dog food. As the snow machine replaced the dog sled, subsistence fishing for summer chums declined. Beginning in 1967 commercial fishing regulations affecting summer chums were gradually liberalized. As a result of regulation changes (e.g. mesh size specifications and earlier openings of the fishing seasons), increased fishing effort and processor facilities, and the development of Japanese markets, the Yukon River summer chum salmon commercial harvest has increased sharply. Only 11,000 summer chums were taken commercially in 1967 while a record 1,191,800 was harvested in 1981. The recent 5 year average commercial harvest (1978-82) is 942,500 fish. The majority of the commercial harvest takes place in districts 1, 2 and 4. Approximately 227,000 summer chums are taken annually (1978-82 average) for subsistence.

Summer chums exhibit similar run timing as the kings, entering the lower river during June and early July. Major spawning tributaries include the Andreafsky and Anvik Rivers and several others upstream to and including those of the Koyukuk River drainage. Estimates of total run size using tag recovery data were 3.6 and 1.6 million fish for 1970 and 1971, respectively. Documented

harvest and escapements yield minimum population estimates ranging from 1.2 to 5.6 million fish annually. An escapement of over one million summer chums was estimated in 1975 and 1981 in the Anvik River. Overall, Yukon River summer chum escapements have been good in recent years.

Fall Chum Salmon: Although the commercial fishery for fall chum salmon in the Yukon River began in the early 1960's, the fishery has undergone major expansion only since 1969. Commercial catches have ranged from 8,300 in 1964 to 486,100 in 1981 and the recent 5 year average (1978-1982) harvest is 323,100 fish. The recent annual subsistence catch of fall chums is 167,500 (1978-82 average).

As additional information (catch and escapement data) has become available in recent years, it has been evident that the size of the Yukon River fall chum runs has fluctuated sharply depending on brood year run strength and environmental factors. In order to provide for more flexible management of the variable fall chum runs, the Board of Fisheries replaced the previous rigid quotas (250,000 fish for the entire river) with guideline harvest ranges (presently 145,500 - 320,500 for the entire river). In response to increased fishing effort and efficiency, fishing time restrictions have been implemented in recent years to bolster escapement. These reductions in fishing time help minimize overharvesting certain run segments and spread out the harvest over a greater portion of the run.

Because of their good quality (bright, silvery appearance, large size, robust body shape and high oil content) which is related to their upriver spawning destinations, fall chums are in great demand and are commercially harvested in all fishing districts. Fall chums are of less important for subsistence than summer chums throughout the Yukon River drainage except upstream of the mouth of the Koyukuk River where it is estimated that fall chums comprise 60-75% of the total subsistence harvest.

Fall chums enter the lower Yukon River from mid-July through early September. Major spawning areas are located in the Tanana River (Toklat River, Delta River and the upper Tanana River near Big Delta) and the Porcupine River (Sheenjek and Fishing Branch Rivers) drainages. Tagging studies near Galena and Ruby indicate that the early run (mid-July - early August) of fall chums is bound for the Porcupine River system and Yukon Territory systems. The late run of fall chums (mid August - early September) is believed destined primarily for the Tanana River. Upper Tanana River drainage escapements in general appear more stable and experience less fluctuation than the Toklat River and Porcupine River systems. For example, recent annual escapements in the Fishing Branch River (Porcupine River drainage) have ranged from 353,000 (1975) to 5,900 (1982) and in the upper Toklat River from 107,000 (1979) to 3,300 (1982). During 1980-1982 both Tanana River and Porcupine River escapements, with the exception of the upper Tanana River stocks in 1981, have shown a marked decline with the lowest observed escapements occurring in 1982.

New information from offshore tagging studies indicate that Yukon River fall chum salmon stocks are present in the vicinity of South Unimak-Shumagin Islands areas during June. Fall chums (and other western Alaska chum salmon stocks) are intercepted by the U.S. domestic fishery operating in the South Unimak-Shumagin Islands area. The degree of interception is unknown but because of their later run timing, which coincides with the peak of the

fishery, Yukon River fall chum may be particularly vulnerable. During the past three years chum salmon catches taken during the June fishery have increased sharply: 1980 (528,000), 1981 (575,000) and 1982 (1,015,000) compared to previous 10 year average, 1970-1979 (277,000).

Coho Salmon: This species is of minor importance in both the commercial and subsistence fisheries. The commercial catch since 1961 has ranged from 350 to 38,000 and the recent 5 year average (1978-82) is 22,500 fish. The commercial harvest of cohos is dependent upon fishing effort exerted on the more numerous fall chums. Annual subsistence catches are approximately 19,400 (1978-82 average).

Cohos first enter the lower Yukon River about one week later than fall chums and the run peaks during late August. Spawning occurs discontinuously throughout the drainage with the largest spawning concentrations documented in the tributaries of the upper Tanana River drainage.

OUTLOOK FOR 1983

King Salmon: In most years the dominant age class returning are 6 year old fish, however 5 and 7 year old fish also contribute to the run. The 1977 brood year run (6 year olds in 1983) was judged average in abundance as indicated by comparative catch and escapement data. The return of 5-year-olds (1978 brood year) is expected to be substantial based on above-average run strength in 1978. Seven-year-olds are not expected to contribute substantially to the run in 1983 based on below-average to average run strength of 6-year-olds in 1982. In summary, based on evaluation of brood year run size data, it is expected that the 1983 Yukon River king salmon run will be average in magnitude. The expected commercial harvest is expected to total 90,000-120,000 fish.

Summer Chum Salmon: Normally the Yukon River summer chum salmon runs are composed of predominantly 4-year-old fish, although in some years 5-year-old fish are present in large numbers. The return of 4-year-olds in 1983 will be dependent on the strength of the 1979 brood year and the survival of the resulting offspring. Based on the available catch and escapement data, the 1979 summer chum run was considered below average to average in magnitude, and the return of 4-year-olds in 1983 is expected to be of similar magnitude. The return of 5-year-olds is not expected to be substantial based on the average return of 4-year-olds in 1982. In summary, the magnitude of the Yukon River summer chum salmon run in 1983 is expected to be below average to average in magnitude. The commercial harvest is expected to total 600,000-1,200,000 fish.

Fall Chum Salmon: Similar to the summer run, the majority of the fall chum returning each year are 4-year-old fish. Based on comparative catch and escapement information, the 1979 brood year (4-year-olds) was considered above average in magnitude. The return of 5-year-olds (1978 brood year) is not expected to be substantial because of the weak return of 4-year-old fish in 1982. In summary, the 1983 Yukon River fall chum salmon run is expected to be average to above average in magnitude. The expected commercial harvest should approximate 145,500 to 233,000 fish. If the run is of very large magnitude a larger catch may be taken; however, the upper end (320,500) of the guideline harvest range should not be exceeded.

Coho Salmon: The coho salmon run annually is much smaller than the fall chum run, and the harvest is dependent on the duration of the fishery for fall chums. The harvest is expected to total 20-30,000 fish for the entire river. A larger harvest may be taken if the fishing season is reopened for cohos in late August - early September after the fall chum run has ended. There are indications that coho returns to the Yukon River and other western Alaska systems are increasing and larger harvests may be warranted without impacting escapements.

MANAGEMENT STRATEGY, LOWER YUKON (DISTRICTS 1, 2 AND 3) FISHERIES

King and Summer Chum Salmon: Sustained yield management of the king and summer (dog) chum salmon runs is complicated by the fact that both species exhibit similar run timing. The harvest of summer chums in the lower river is greatly dependent on the regulations and management strategies employed toward the more intensively managed king salmon fishery. Even if an exceptionally large run of summer chums salmon develops, the harvest of summer chums may not be more than average because of the overriding importance of king salmon, especially if the king run is small and fishing restrictions are required.

The district 1 and 2 king and summer chum salmon fisheries are regulated by weekly fishing periods established by emergency order. The fishing schedule will initially be two 24 hour periods a week. Fishing periods may be further changed by emergency order depending on indicated run strength.

The commercial fishing season in districts 1, 2 and 3 will open by emergency order between June 5-15 (about June 10 if normal run timing). An emergency opening of the fishing season allows more flexible management in order to provide increased escapements from the early portion of the king salmon run which is subjected to intensive fishing effort along the entire length of the river. Prior to opening the fishing season, subsistence and test fishing catches will be closely monitored as indicators of run timing and abundance. An early opening of the commercial fishing season will occur if consistent, increasing subsistence and/or test net catches are occurring over a one week period. The fishing season will be opened on a staggered basis: district 1 followed by district 2 and then district 3.

A guideline harvest range of 60,000-120,000 king salmon for districts 1 and 2 is established by Board of Fisheries regulations. The midpoint (90,000) of this guideline harvest range should be the expected catch if the run is of average magnitude. The expected catch if the run is above average would be 90-120,000 kings. If an exceptionally large run occurred as in 1979-81, then the upper end (120,000) of the guideline harvest range may be exceeded. Fishing time may be reduced in districts 1 and 2 to spread out the harvest over most of the run even if the run is large. With increased fishing efficiency the commercial fishery has the capability to overharvest various run segments or stocks in a very short time.

If the king salmon run is small, fishing time in districts 1 and 2 will be reduced not later than June 20-25 (the peak of normal run timing). Additional reductions in fishing time or an early closure of the season may be necessary if indicated low abundance of kings continues.

A reduction in fishing time (coupled with 6" maximum mesh regulation) because of a poor king run, is favored instead of complete season closure in June as this would prevent any harvest of summer chums. Achievement of an optimum harvest of summer chums while providing protection of king salmon, especially during small king runs, is a complex problem facing management. It should be clearly stated that the Department recognizes the importance of the long established king salmon fishery. The intention of the 6 inch maximum mesh size regulation in the lower two districts is to allow an optimum harvest of chum salmon after a normal harvest of king salmon, consistent with spawning ground and subsistence fishery requirements, has been made.

In districts 1 and 2, after the changeover to gillnets of 6 inch or smaller mesh, fishing time will be at 2 days a week if the summer chum run is of average magnitude in order to provide for upriver escapement and fishery requirements. In recent years with the exception of 1975 and 1981 the summer chum run has become fully exploited, especially with the expansion of the upper Yukon area fishery.

The Board of Fisheries adopted regulations to provide a 24 hour subsistence fishing period every other weekend during the commercial fishing closures through July 19 in districts 1 and 2. These special subsistence only fishing periods will be announced by emergency orders for each district. Since these special subsistence fishing periods represent a drastic departure from previous regulatory framework (where subsistence and commercial fishing periods were coincidental in order to enforce commercial fishing closures), close monitoring of the subsistence fishery will be necessary. If it is apparent that substantial subsistence fishing effort is occurring and that large catches (king salmon) are resulting or if large scale violations are occurring (i.e. salmon taken during subsistence periods are sold), then a reduction in commercial fishing time may be necessary.

In district 3 the king salmon fishery is governed by a 1,800-2,200 guideline harvest range during the "king salmon season" (no mesh size restrictions). The changeover date to gillnets of 6 inch or smaller mesh in district 3 will normally take place after a date between July 5-15 following the closure of the king salmon season. The reopening of the commercial fishing season to primarily harvest chum salmon will be dependent on the timing of the salmon runs in order to minimize the incidental capture of the late run of kings which are traditionally utilized for subsistence in this district. However, during years of high abundance an additional 1-2,000 kings may be taken commercially with small mesh gillnets.

<u>Fall Chum Salmon</u>: In the lower Yukon area where the fall chum salmon commercial fishery has rapidly expanded, in terms of increased fishing effort and efficiency, a more conservative management strategy is necessary to insure that adequate escapements and subsistence requirements are met. Consequently, at its March, 1983 meeting the Board adopted regulations regarding fishing season closures and reduced fishing time and provided direction on guideline harvest range management. These restrictions were required to prevent overharvesting of specific run segments and to distribute the harvest throughout the run. The Board adopted the following changes:

1. <u>Commercial Fishing Season</u>
   Provides for an approximate 7 day closure of the commercial fishing

season for the lower Yukon area during the early portion of the fall chum run (Porcupine River - Upper Yukon stocks). The season closure will be implemented by emergency order on a staggered basis for each district. The following example depicts the probable season closures for each district based on a fall chum run of normal timing:

District 1:	July 19 through July 25
District 2:	July 22 through July 28
District 3:	July 25 through July 31

2. Set Net Only Area

During the fall chum salmon commercial fishing season in district 1, commercial fishermen will be restricted to the operation of set gill nets in a special "Set Net Only" area. Commercial fishermen must register to fish the set net only area and may not fish for commercial purposes in other areas of district 1 or in districts 2 or 3 during the remainder of the commercial fishing season. Commercial fishermen, registered to fish in the set net only area, may not fish for subsistence with drift gillnets in districts 1, and 3. Subsistence fishing with drift gill nets in the set net only area is prohibited during the remainder of the commercial fishing season.

3. Weekly Fishing Periods

Based on emergency order authority, a fishing schedule of two 24 hour periods a week will be allowed in the set net only area. In other areas of district 1 and in district 2 both set and drift gill nets may be operated for two 12 hour fishing periods a week during the commercial fishing season. A daylight fishing schedule for the 12 hour periods (e.g. 6 a.m. to 6 p.m. - same day) will be established for fishermen's safety. In district 3 the fishing schedule will be two-24 hour periods a week.

4. Guideline Harvest Range

The fall chum salmon fishery is governed by a flexible guideline harvest range of 120,000 to 220,000 fish for districts 1, 2 and 3 combined. The Board of Fisheries directed the Department to target toward the lower end of the present guideline harvest range unless the run is of very large magnitude. If the fall chum run is of below average to average magnitude, then the harvest should approximate 120,000-170,000 fish. If the fall chum run is exceptionally large, then a greater harvest may be taken, but the upper end of the guideline harvest range (220,000) should not be exceded.

In district 1 (excluding the Set Net Only Area) and in district 2 the fishing schedule (established by emergency order) during the fall chum run will be two-12 hour periods per week. The reduced commercial fishing periods affect the subsistence fishery since fishing time for both fisheries is coincidental. An additional fishing period (24 hours) each weekend for subsistence will be allowed in district 1 (excluding the set net area) and district 2 after the reopening of the fishing season in late July by emergency order. Continuation of these special subsistence fishing periods during the season will be contingent on minimal violations occurring. Once the commercial fishing season is closed, subsistence fishing will be allowed seven days a week by regulation.

(commerical plus subsistence) may exceed traditional harvest levels in this district.

If the king salmon guideline harvest range (2,250-2,850 fish) is taken before July 10 in district 4, the commercial fishing season would be closed by emergency order. The season would be reopened during the period July 10 to July 31 to fishing with gillnets of six inch or smaller mesh and fishwheels. This action would minimize additional harvest of large king salmon and still allow continued commercial fishing for the more abundant summer chums.

In subdistrict 4-A (upstream from Stink Creek), drift netting for subsistence purposes is allowed from June 21 through July 7 and after August 2. The staff will attempt to monitor this fishery in-season and a post-season effort will be made to quantify numbers of fish taken by gear type.

In district 5 kings are of greater importance and are mostly taken with gillnets for both commercial and subsistence purposes. Summer chums are not abundant and are mainly retained for subsistence purposes. There are four subdistricts within the district with several having separate guideline harvest ranges. The overall guideline harvest range for the district is 2,700-3,300 kings. Once the king salmon guideline harvest range is taken, the appropriate subdistrict(s) will be closed until the fall season.

In district 6 (Tanana River drainage) fishwheels are primarily used to harvest king and summer chum salmon for both commercial and subsistence purposes. Once the king salmon guideline harvest range of 600-800 fish has been taken in district 6, the commercial fishing season will be closed. Also, commercial fishing will be closed in subdistrict 6-C by emergency order when the subsistence king salmon quota of 750 fish is met (see Subsistence Fishery Management Plan, subdistrict 6-C).

If subsistence catches of summer chums after the king salmon season closure appear above average in magnitude, a reopening of the commercial season in district 6 would be considered.

Fall Chum and Coho Salmon: In the upper Yukon area, fall chum and coho salmon are normally present from mid-August until late September or early October. The commercial salmon fisheries are regulated by scheduled weekly fishing periods and guideline harvest ranges (25,500-100,500 fall chums and cohos combined for districts 4, 5, and 6). In accordance with policy formulated at the April 1983 meeting of the Board of Fisheries, the Department is directed to manage the fall chum salmon commercial fishery very conservatively. In compliance with those instructions, the Department will manage the fishery for harvests approaching the lower end of the guideline harvest range. A larger harvest may be allowed if the run is exceptionally strong, but in no case will the combined guideline harvest range for the entire river be exceeded.

District 4: Regulations do not provide for the commercial harvest of fall chums in subdistrict 4-A.

Subdistrict 4-B is that area of district 4 along the north bank of the Yukon River from Cone Point to the mouth of Illinois Creek, including nearshore islands. Tagging studies have shown that most fall chums that migrate along the north bank are destined for spawning streams within the Porcupine and

Coho Salmon: Cohos are taken incidentally to the more abundant fall chums and the commercial fishery in the lower Yukon area usually closes by mid-August when the coho run is beginning to peak. Present commercial and subsistence utilization of cohos throughout the drainage is minimal. During years of high coho salmon abundance it is evident that a much larger coho salmon harvest could be taken. A reopening of the lower Yukon area commercial fishing season for coho salmon fishing after August 25 and extending into early September may be allowed. This special coho salmon fishing season will be considered experimental and contingent on an above average coho run occurring coupled with a small incidental catch of late fall chums.

MANAGEMENT STRATEGY, UPPER YUKON (DISTRICTS 4, 5 AND 6) FISHERIES

King and Summer Chum Salmon: As in the lower Yukon Area, the king and summer chum (dog) salmon runs in the Yukon area exhibit similar run timing. The upper Yukon area commercial king salmon fishery is primarily regulated by a combined 5,550-6,950 fish guideline harvest range which is apportioned to the three districts. Presently there are no guideline harest ranges specifying the numbers of summer chums which may be taken. Management of the summer chum fishery is based on in-season assessment of run strength.

In accordance with a Board of Fisheries directive, upper Yukon districts (also including district 3) king salmon catches will be allowed to approach or exceed the upper end of the guideline harvest range if the run is very large. This directive acknowledges the following conditions unique to Yukon salmon management:

1) there are fewer fishermen and smaller guideline harvest levels associated with the upper districts with less risk of overharvesting stocks;

2) usually by the time that the run magnitude can be accurately assessed, most of the fish have moved into the upper districts.

Commercial and subsistence fishing is allowed for two 48 hour fishing periods a week in most areas of the upper Yukon area. These split fishing periods help spread out the harvest over a greater portion of the run and afford additional protection to smaller stocks which are move susceptible to overharvest than the larger, more productive stocks. Also split periods allow the Department additional time to collect and evaluate catch data between periods.

If a weak run of either kings or summer chums develops then the Department would consider various restrictions. These restrictions would probably vary in each distict because of the different types of fisheries and the importance of the species harvested.

Fishermen in district 4 usually retain their kings for subsistence rather than sell them in order to allow the commercial fishing season to remain open for the more abundant and commercially valuable summer chums. However, because of a substantial increase in fishing effort due to the rapid development of the commercial fishery and the increase in the district 4 king salmon guideline harvest range granted by the Board in 1980, the total harvest of kings

upper Yukon drainages. Those fall chums and cohos traveling along the south bank (subdistrict 4-C) are bound for the Tanana River drainage.

Establishment of differing fishing periods or harvest levels for subdistricts 4-B and 4-C may be required, depending on relative strength of the various stocks. It is expected that in most years these two subdistricts will be managed as one.

In some years (as in 1981) the fall chum salmon run passing through subdistricts 4-B and 4-C are offshore and not available to fishwheels and set gillnets. If this situation occurs again, the Board of Fisheries has directed the Department to optimize the harvest (proportional to run strength) in subdistricts 4-B and 4-C by adjusting fishing time based on analysis of catch data from other districts.

Districts 5 and 6: In districts 5 and 6 the opening of the fall season will be delayed until the strength of the fall chum run has been assessed and the run has been distributed throughout the major fishing areas of both districts. This strategy has been endorsed by the Board of Fisheries and will result in better balanced harvests and escapements and throughout the districts.

As in district 4, separate subdistricts (5-A and 5-B) along the north and south banks of the Yukon River have been established to allow stock-specific management of fall chums. Similar to the management strategy outlined for district 4, differential fishing periods (and harvests) may be applied. However, because of the Department's relative inability to assess run strength in this part of the river, independent management of these subdistricts is unlikely unless unusually large or small runs occur.

A separate fall chum and coho salmon guideline harvest range of 2,000-4,000 fish has been established for subdistrict 5-D of district 5; it is expected that subdistrict season openings within district 5 will be concurrent and that subdistrict closures will occur independently.

In subdistrict 6-C the commerical fishing season will be closed at such time as the subsistence fall chum and coho salmon quota of 5,200 fish (both species combined) has been met (Subsistence Fishery Management Plan, subdistrict 6-C) or when the district-wide commercial guideline harvest range has been achieved.

Subsistence Salmon Fishery Management Plan, Subdistrict 6-C

This management plan was adopted by the Board of Fisheries to insure adequate subsistence salmon harvests and escapements in that portion of the Tanana River upstream of the Wood River.

Subsistence salmon harvest quotas in subdistrict 6-C are 750 king and 5,000 chum salmon taken through August 15 and 5,200 chum and coho salmon combined taken after August 15. When either the king or chum salmon quotas for the period before August 16 has been taken the subsistence salmon fishing season in subdistrict 6-C will close. Also, the commercial fishing season in subdistrict 6-C will be closed by emergency order when either the subsistence king or summer chum salmon quota is taken.

If the subsistence king salmon quota has been attained, the Department may reopen the subsistence fishery in subdistrict 6-C to fishermen using set gillnets of 6 inch or smaller mesh or fishwheels between July 5-25. This would allow harvest of summer chum stocks and minimize the harvest of large king salmon.

A later subsistence fishing season in subdistrict 6-C will be opened after August 15 to allow the taking of the fall chum and coho salmon quota for the period after August 15. If the subsistence chum salmon quota in subdistrict 6-C has not been obtained through August 15, the remaining quota will not be added to the chum salmon harvest quota for the period after August 15. Once the subsistence fall chum and coho salmon quota has been taken, the commercial fishing season will also close in subdistrict 6-C in accordance with regulations adopted by the Board.

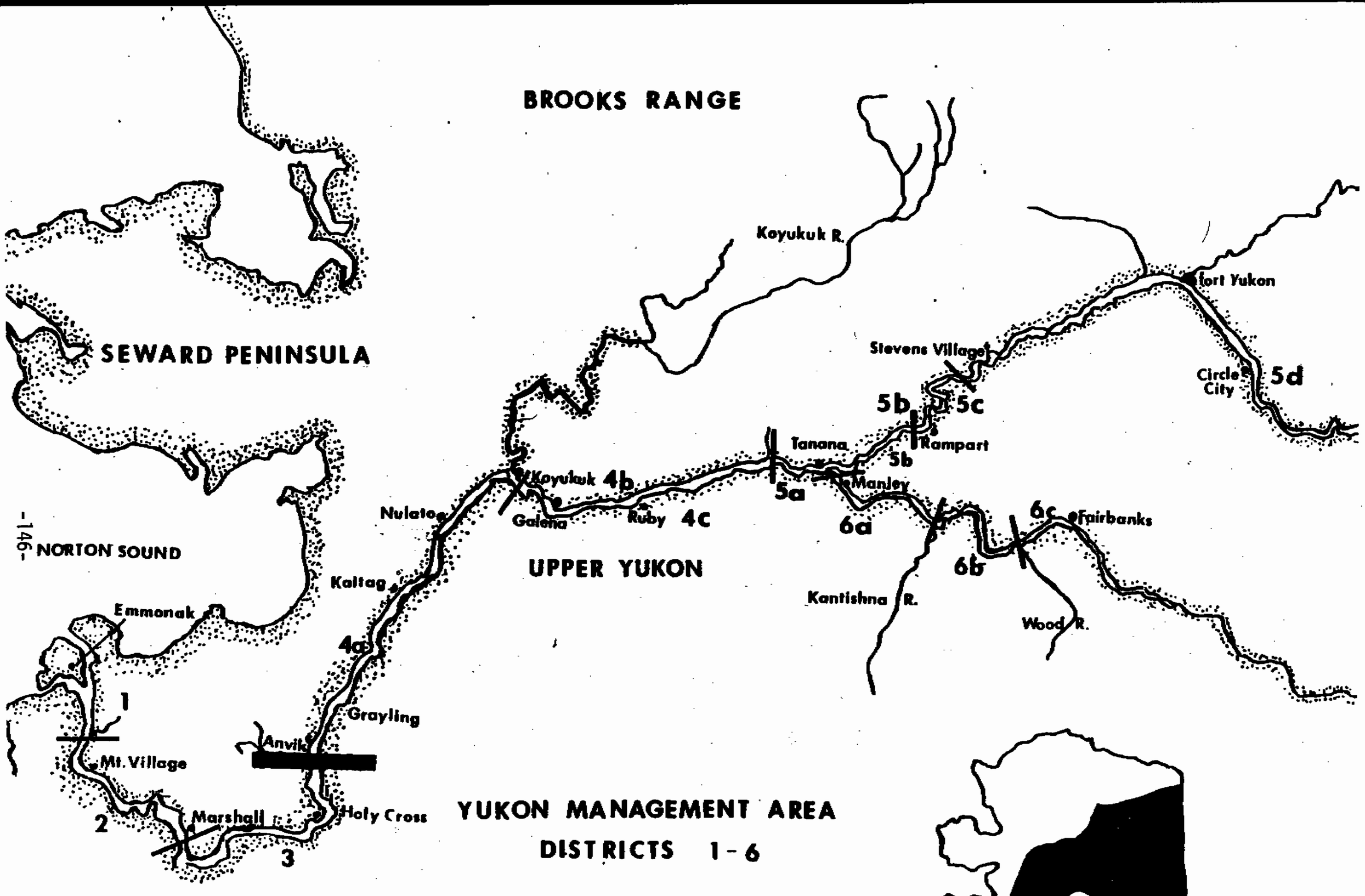
ENFORCEMENT

Major violations continue to be the illegal sales of subsistence caught salmon or their parts including salmon roe. These violations primarily occur in districts 5 and 6.

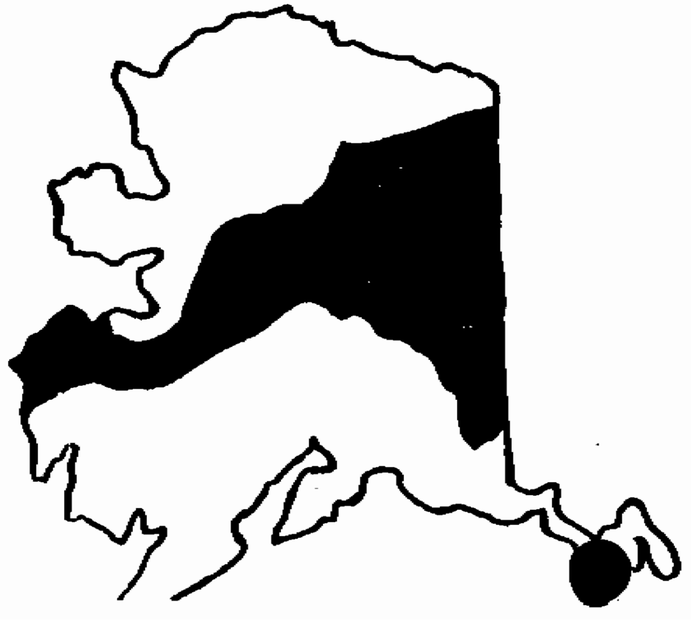
In district 6, fishermen are required to immediately remove the dorsal fin from subsistence caught salmon. This regulation is necessary for enforcement purposes in order to distinguish between subsistence caught and commercially taken salmon.

Also buyers and processors are prohibited from receiving for commercial purposes, to barter or solicit to barter subsistence taken salmon or their parts. Further restrictions in the bartering of salmon or their parts may be implemented by emergency order for a specific time and area if circumvention of management programs is occurring because of illegal bartering activities.

Fishermen are requested to report any instances of fishery violations to Department of Fish and Game or Division of Fish and Wildlife Protection (Department of Public Safety) personnel in order that follow-up action may be taken.



YUKON MANAGEMENT AREA
DISTRICTS 1-6



Figure

YUKON AREA COMMERCIAL SALMON CATCH AND EFFORT DATA, 1981

DISTRICT	FISHING VESSEL	KINGS	SUMMER CHUMS	FALL CHUMS	TOTAL CHUMS	COHOS	TOTAL
1	448	99,219	507,629	167,834	675,463	13,154	787,836
2	225	45,302	351,458	154,883	506,341	7,837	559,480
3	23	4,023	54,639	19,043	73,682	427	78,132
Subtotal Lower Yukon	696	148,544	913,726	341,760	1,255,486	21,418	1,425,448
4	94	1,347	243,536	19,447	262,983	-	264,330
5	56	6,452	85	95,844	95,929	-	102,381
6	31	1,264	34,465	29,008	63,473	2,284	67,021
Subtotal Upper Yukon	181	9,063	278,086	144,299	422,385	2,284	433,732
Total	877	157,607	1,199,812	486,059	1,677,871	23,702	1,858,180

COMMERCIAL SALMON CATCHES, YUKON AREA, 1961-1981

YEAR	KING	SUMMER CHUM	FALL CHUM	TOTAL CHUM	COHO	TOTAL
1961	120,260	-	42,577	42,477	2,855	165,692
1962	94,374	-	53,160	53,160	22,926	170,820
1963	116,994	-	-	-	5,572	122,566
1964	93,587	-	8,347	8,347	2,446	104,380
1965	118,098	-	23,317	23,317	350	141,765
1966	93,315	-	71,045	71,045	19,254	183,614
1967	129,706	11,179	38,274	49,453	11,047	190,206
1968	106,526	14,470	52,925	67,395	13,303	187,224
1969	90,223	60,569	131,291	191,860	14,981	297,064
1970	80,269	137,368	209,356	346,724	12,245	439,238
1971	110,507	100,090	189,594	289,684	12,203	412,394
1972	92,840	135,668	152,176	287,844	22,233	402,917
1973	75,353	285,844	232,090	517,934	36,641	630,029
1974	97,919	604,210	273,158	877,368	16,240	993,402
1975	63,740	728,156	265,156	993,312	2,346	1,050,945
1976	88,671	598,227	163,282	761,509	5,197	855,377
1977	96,414	548,958	248,739	797,697	38,021	932,096
1978	97,602	1,045,092	243,737	1,288,829	25,960	1,412,391
1979	129,056	803,500	362,480	1,165,980	17,110	1,312,146
1980	155,088	1,057,761	298,123	1,355,884	8,741	1,517,413
1981	157,607	1,191,812	486,059	1,677,871	23,702	1,858,180